DOCUMENT RESUME

ED 051 389 VT 013 026

AUTHOR	Vocino, Thomas; And Others
TITLE	Professional, Administrative, and Technical Manpower in Illinois Local Government.
INSTITUTION	Southern Illinois Univ., Carbondale.
SPONS AGENCY	Department of Housing and Urban Development, Washington, D.C.
PUB DATE	69
NOTE	214p.
AVAILABLE FROM	Publications, Public Affairs Research Bureau, Southern Illinois University, Carbondale, Illinois 62901 ($3.00)
EDRS PRICE	EDRS Price MF-$0.65 HC-$9.87
DESCRIPTORS	*City Government, *Employment Projections, Employment Trends, *Government Employees, *Labor Supply, Manpower Needs, *Personnel Needs, Statistical Analysis

ABSTRACT

In order to fill an information gap regarding the employment of professional, administrative, and technical personnel by local governments, this study developed the methodology to estimate local government manpower supply and demand, and applied this methodology to the Illinois labor force. Occupations for which the needs are critical were projected through 1975, on the basis of a questionnaire survey of local government officials. For each of 100 occupations involved in performing 13 functions of local governments, local officials were asked to provide information on salary, education, projected needs, and recruitment difficulties. A sample questionnaire and a description of the regression and the data are appended. (BH)

ED051389

Professional, Administrative and Technical Manpower in Illinois Local Government

By

Thomas Vocino

With the Assistance of
Allan H. Lammers, Jr.
Harris M. Wacirah

VT013026

Public Affairs Research Bureau
Southern Illinois University at Carbondale

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PROFESSIONAL, ADMINISTRATIVE, AND TECHNICAL MANPOWER IN ILLINOIS LOCAL GOVERNMENT

U.S. DEPARTMENT OF HEALTH, EDUCATION
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Public Affairs Research Bureau
Southern Illinois University, Carbondale
1969

Southern Illinois
University

CARBONDALE, ILLINOIS 62901

Public Affairs Research Bureau

July 21, 1969

Board of Higher Education
State of Illinois
300 East Monroe
104 St. George Building
Springfield, Illinois 62706

Gentlemen:

Transmitted herewith is a report upon the Local Government Manpower Supply And Needs Study which has been conducted by the Public Affairs Research Bureau during the past twelve months. This study was carried out with the assistance of funds granted to Southern Illinois University by the Board of Higher Education from the Department of Housing and Urban Development in Washington.

My associates and I are proud to submit this report for we feel that it is a good one. Because of its complexity and the difficulty of securing data, the field of local government manpower needs in the United States has been too little studied. The study reported herein faced both substantive and procedural problems. These we feel have been successfully overcome.

We are hopeful that this report will be immediately useful to the Board of Higher Education in its consideration of curricula for institutions of higher learning in the State of Illinois. We also hope that it will find a meritorious place in the literature of manpower needs, for both substantive and methodological reasons.

All of our associations with the personnel of the Board in the course of this study have been pleasant and productive. We hope that this feeling is reciprocated on the part of Board personnel and that they will find this report to be useful on many occasions.

Sincerely yours,

David Kenney

David Kenney
Bureau Director

TABLE OF CONTENTS

CHAPTER PAGE

LETTER OF TRANSMITTAL i

TABLE OF CONTENTS iii

LIST OF TABLES v

LIST OF FIGURES ix

LIST OF APPENDICES ix

ACKNOWLEDGEMENTS xi

ONE INTRODUCTION 1

TWO METHODOLOGY 11

THREE TRENDS OF GOVERNMENT EMPLOYMENT IN THE UNITED STATES AND ILLINOIS 41

FOUR GENERAL FINDINGS CONCERNING PAT MANPOWER IN ILLINOIS LOCAL GOVERNMENT 57

FIVE THE FUNCTIONS OF FINANCIAL ADMINISTRATION AND GENERAL CONTROL 75

Financial Administration 75

General Control and Administration 85

SIX THE FUNCTIONS OF LAW ENFORCEMENT AND FIRE PROTECTION 103

Police Protection and Corrections 103

Local Government Employment in Fire Protection 109

SEVEN THE FUNCTIONS OF PARKS AND RECREATION AND COMMUNITY DEVELOPMENT 113

Parks, Recreation, and Natural Resources 113

Community Development and Housing 119

TABLE OF CONTENTS (cont.)

CHAPTER PAGE

EIGHT THE FUNCTIONS OF HIGHWAYS, SANITATION, AND UTILITIES 125

Streets and Highways. 125

Sewage and Sanitation 132

Public Utilities 138

NINE THE FUNCTIONS OF PUBLIC WELFARE AND HEALTH AND HOSPITALS 147

Public Welfare 147

Health and Hospitals 154

TEN THE FUNCTIONS OF LIBRARIES AND EDUCATION 165

Libraries 165

Local Government Employment in Education. 170

ELEVEN AFTERWORD 173

BIBLIOGRAPHY 181

APPENDIX A 195

APPENDIX B 205

INDEX 209

LIST OF TABLES

TABLE PAGE

1. Questionnaire Completion by Type of Government 27

2. Occupational Position of Responding Officials 32

3. Comparison of Public and Private Civilian Employment: 1919-1967 . . . 42

4. Local Government Employment in Illinois, by Functions, 1967 47

5. Local Government Employment in Cook County, by Functions, 1967 49

6. Local Government Employment in Regions, 1967 50

7. Ranking of Counties with the Greatest Numbers of Local Government Employment Growth, 1962-1967. 51

8. Ranking of the Top Ten Counties in Respect to Employee Percentage Growth, 1962-1967 52

9. Growth of Local Government Employment by Region, 1962-1967 54

10. Ranking of the PAT Occupations Found in Greatest Number in Illinois Local Government 68

11. Ranking of PAT Occupations by Difficulty of Recruitment for Illinois Local Governments 70

12. Ranking of PAT Occupations for Which Illinois Local Governments Have the Most Pressing Needs 72

13. PAT Occupations Most Difficult to Recruit from Within Illinois 74

14. Location of PAT Occupations of Financial Administration in Illinois Local Government 77

15. Difficulty of Recruitment for PAT Occupations in Financial Administration 77

16. Projected Percentage Growth for Financial Administration PAT Occupations for 1975 78

LIST OF TABLES (cont.)

TABLE PAGE

17. Local Government Employment in Financial Administration, by Region, 1967 82

18. Growth of Local Government Employment in Financial Administration, by Region, 1962-1967. 83

19. Location of PAT Occupations in General Control and Administration in Illinois Local Government 89

20. Difficulty of Recruitment for PAT Occupations in General Control and Administration. 90

21. Projected Percentage Growth for General Control and Administration PAT Occupations for 1975 91

22. Local Government Employment in General Control, by Region, 1967 100

23. Growth of Local Government Employment in General Control, by Region, 1962-1967 101

24. Location of PAT Occupations of Police Protection and Corrections in Illinois Local Governments 104

25. Difficulty of Recruitment for Police Protection PAT Occupations. . 104

26. Local Government Employment in Police and Corrections, by Region, 1967 107

27. Growth of Local Government Employment in Police Protection and Corrections, by Region, 1962-1967 108

28. Local Government Employment in Fire Protection, by Region, 1967 110

29. Growth of Local Government Employment in Fire Protection, by Region, 1962-1967 111

30. Location of PAT Occupations in Parks, Recreation, and Natural Resources in Illinois Local Government 114

31. Difficulty of Recruitment for Parks, Recreation, and Natural Resources PAT Occupations 114

LIST OF TABLES (cont.)

TABLE PAGE

32. Projected Growth for Parks, Recreation, and Natural Resources PAT Occupations in 1975 115

33. Local Government Employment in Parks and Recreation, by Region, 1967 117

34. Difficulty of Recruitment for Community Development and Housing PAT Occupations 120

35. Projected Growth for Community Development and Housing PAT Occupations in 1975 120

36. Local Government Employment in Housing and Urban Renewal, by Region, 1967 122

37. Location of PAT Occupations of Streets and Highways in Illinois Local Governments 127

38. Difficulty of Recruitment for Streets and Highways PAT Occupations 127

39. Local Government Employment in Highways, by Region, 1967 . . . 130

40. Growth of Local Government Employment in Highways, by Region, 1962-1967 131

41. Location of PAT Occupations of Sewage and Sanitation in Illinois Local Government 134

42. Difficulty of Recruitment for Sewage and Sanitation PAT Occupations 134

43. Projected Growth for Sewage and Sanitation PAT Occupations in 1975 134

44. Local Government Employment in Sewage and Sanitation, by Region, 1967 137

45. Location of PAT Occupations of Public Utilities in Illinois Local Governments 140

46. Difficulty of Recruitment for Public Utility PAT Occupations . . . 140

47. Projected Growth for Public Utility PAT Occupations in 1975 . . . 140

LIST OF TABLES (cont.)

TABLE PAGE

48. Local Government Employment in Water Supply, by Region, 1967 142

49. Growth of Local Government Employment in Water Supply, by Region, 1962-1967 143

50. Local Government Employment in Other Utilities, by Region, 1967 144

51. Growth of Local Government Employment in Other Utilities, by Region, 1962-1967 145

52. Difficulty of Recruitment for Public Welfare PAT Occupations . . . 149

53. Local Government Employment in Public Welfare, by Region, 1967 . 152

54. Location of PAT Occupations of Health and Hospitals in Illinois Local Government 156

55. Difficulty of Recruitment for Health and Hospitals PAT Occupations 157

56. Local Government Employment in Health and Hospitals, by Region, 1967 161

57. Growth of Local Government Employment in Health and Hospitals, by Region, 1962-1967 162

58. Location of Professional Librarians in Illinois Local Governments . . 167

59. Difficulty of Recruitment for Library PAT Occupations 167

60. Local Government Employment in Libraries, by Region, 1967 169

61. Local Government Employment in Education, by Region, 1967 . . . 170

62. Growth of Local Government Employment in Education, by Region, 1962-1967 171

LIST OF FIGURES

FIGURE PAGE

1. Government Units Surveyed in County 39

2. Civilian Employment in the United States by Level of Government (1950-1964) 44

LIST OF APPENDICES

A. Cover Letters and Questionnaires 195

B. Regression Explanation and Data 205

ACKNOWLEDGEMENTS

This study would not have achieved many of its objectives if assistance had not been received from numerous individuals and organizations.

Many interest groups, Illinois state government agencies, and regional offices of the federal government were kind enough to reply to our requests for assistance. Many more local government officials completed a mailed questionnaire. If they had not done so, this report would not have been written.

Mr. Bruce Trester, Continuing Education Officer of the Illinois State Board of Higher Education made himself available to answer many questions concerning administrative procedure as well as suggesting several worthwhile avenues of inquiry. Mr. Snyder E. Herrin, Jr. of the Illinois Municipal League and Mr. Charles Kirchner of the Illinois Department of Business and Economic Development graciously tolerated all of my questions and made substantial contributions to my knowledge of Illinois local government. Mr. Maurice Criz and Mr. Sherman Landau of the Governments Division of the United States Bureau of the Census provided information about and data from the as yet unpublished 1967 Census of Governments. If such material had not been received, some aspects of this study would have been curtailed.

The following persons were of invaluable assistance in introducing our study to local officials and urging their participation: Governor Richard B. Ogilvie of Illinois, who was President of the Cook County Board of Commissioners when the study was begun, and Mr. Ronald D. Michaelson of Mr. Ogilvie's staff; Dr. Charles A. Pounnian, Executive Director, Chicago Civil Service Commission; Mr. Steven Sargent, Executive

Director, Illinois Municipal League; Mr. Arthur L. Schultz, Executive Vice President, Illinois Association of Park Districts; Mr. James M. Walsh, Executive Director, Illinois Association of Supervisors, County Commissioners and County Highway Superintendents; Mr. Troy A. Kost, Executive Secretary, Township Officials of Illinois; and Mr. Leslie W. Heiser, Superintendent, Division of Soil and Water Conservation, Illinois Department of Agriculture.

For special cooperation given to Mr. Allan H. Lammers of my staff by two of the largest units with which the study had to deal, our genuine appreciation goes to Mr. Charles E. Hayes, Director of Personnel, Cook County Department of Public Aid and Mr. Jack Shrode of the Metropolitan Sanitary District of Greater Chicago.

Members of the Public Affairs Research Bureau and the Department of Government of Southern Illinois University were available as resource persons in specialized areas. Professors Jack F. Isakoff and John H. Baker of the Department of Government were helpful in respect to data sources for public administration and local government. Professors Roy E. Miller and David H. Everson of the Public Affairs Research Bureau contributed helpful suggestions concerning data collection and analysis.

Without the constant assistance and encouragement of Professor David T. Kenney, Public Affairs Research Bureau Director, this study would never have been completed. Professor Kenney placed the administrative resources of the Bureau at my disposal throughout the project. I was thus able to spend a majority of my time in research instead of administration rather than vice versa. Professor Kenney also found

time from his busy schedule to read the manuscript of the study in full and made numerous worthwhile suggestions.

The key personnel in any research undertaking is the project staff. This project has been extremely fortunate to have three qualified persons. Mr. Allan H. Lammers, Jr. and Mr. Harris Wacirah served as research assistants. Mr. Lammers participated in the planning, field research, problem-solving matters, and editing of the final report. Mr. Wacirah's responsibilities centered about the unenviable tasks of coding data and the construction of tables. Mr. Wacirah performed these tedious tasks with his usual high level of competence. Miss Jill Griffith served as an extremely able secretary for most of the project's life. Roma Connour, Susan Hattersley, Barbara Bennett, Patsy Bowlin, and Imogene Sehnert also added their considerable typing skills to the present undertaking.

To these persons and many others not identified in this acknowledgement, I wish to extend my appreciation. Of course, none of the above persons should be held responsible for any errors of fact or interpretation that may occur in this report. As project director, I have made the major decisions and drafted the report that follows, and thus, am the only individual who should be criticized for errors contained herein.

Thomas Vocino
Research Associate
Public Affairs Research Bureau

July, 1969

Chapter One

INTRODUCTION

This report is the final product of a research contract executed between the Illinois State Board of Higher Education and the Public Affairs Research Bureau of Southern Illinois University in the Summer of 1968. The project has been made possible through funds available under Title VIII of the 1964 Housing Law. The overall supervisor of the Title VIII program is the Federal Department of Housing and Urban Development. HUD, through the State Board of Higher Education, contributed $16,772 which was matched with a like amount of funds and services by Southern Illinois University.

This study has been conducted in order to identify, analyze, and evaluate professional, administrative, and technical (PAT) manpower supply and needs within local governments in Illinois (excluding school districts). PAT manpower has been defined as those positions in Illinois local governments that require (whether a formal or informal requirement) at least two years of post-high school or its equivalent before an individual can be considered. Presently, a multiplicity of training programs have been completed or are in progress in many states;[1] yet, there exists little systematic knowledge of present demands or future growth. The reason for this data gap is that there have been few studies of local government PAT manpower supplies and needs. Norman Beckman, Director of the Urban Management Assistance Administration of HUD, has stated that: "Public sector manpower planning and training has generally been a neglected aspect of administration. Attempts at such planning are handicapped by a lack of basic information and data on present and future employment patterns."[2] It is hoped that this study will begin to fill this knowledge void in respect to Illinois local governments.

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[1] Community Development Training and Urban Information and Technical Assistance: 100 Outstanding Programs (Washington, D.C.: Office of Intergovernmental Relations and Planning Assistance, Department of Housing and Urban Development, June, 1968), pp. 1-20.

Purposes of the Research

The study has five purposes. They are to (1) locate the current supply of professional, administrative, and technical (PAT) manpower in Illinois local government; (2) identify those PAT occupations for which Illinois local governments have the most pressing needs; (3) project the PAT occupational needs of Illinois local governments in 1975; (4) stimulate Illinois local governments to consider their future needs for PAT manpower; and (5) develop a workable methodology for conducting PAT manpower studies on a statewide basis.

In respect to the first purpose, there is a scarcity of knowledge concerning Illinois local government PAT manpower except for a general awareness that there is a concentration of such manpower in the Chicago metropolitan area. It is essential to have current supply data if statewide projections are to be made independently of the judgments of local officials. The inappropriateness of currently available statistics for determining future PAT manpower need in Illinois local governments is discussed in detail in Chapter Two.

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[2] Norman Beckman, "Planning for Maximum Feasible Understanding," (paper presented at the 30th meeting of the American Society for Public Administration, Miami Beach, Florida, May 21, 1969), p. 12.

Concerning the second purpose, current budgeted but unfilled positions have been used as indicators of occupations considered to be most pressingly needed. Implementation of various educational programs will not necessarily result in the reduction of local government recruitment problems. The inability of local governments to compete in PAT manpower markets has many ramifications that the researchers will touch upon throughout this report. However, for those positions that require only two years of post-high school training or equivalent experience (the lower end of the project definition of a PAT employee), information concerned with pressing needs should be of utility to those individuals responsible for the development of in-service training programs, and to junior college curriculum planners. Shortages in occupations that require lesser education or experience can be more rapidly met by implementation of in-service programs, full-time institutes, and technical programs in the junior colleges, because individuals completing these programs have a greater tendency to remain in the geographical area in which they have taken their training. On the other hand, occupations requiring greater education and experience take longer initially to train. Individuals who complete such occupational requirements are much more mobile.

In respect to the third purpose, reasonably accurate projections can be used to plan curricula that will help meet future needs. The previously mentioned lack of appropriate PAT manpower data necessitated a reliance on the judgment of local officials. That is, local officials made projections of the numbers of accountants, civil engineers, and so forth that would be needed for their governments in 1975. The researchers have tabulated these projections and analyzed them in respect to their reasonableness. The problem of achieving reliable projections in this manner is discussed in detail in the sections on the study design and evaluation of projections in Chapter Two.

Concerning the fourth purpose, one of the reasons for the difficulties experienced by local governments is that there has been minimal effort to anticipate future problems through planning. This situation is true for personnel management as well as other areas. Many officials have indicated through letters and conversations that their assessments of future manpower needs for our survey were the first such systematic efforts made by their units. In addition, the rate of return of the study questionnaire indicates that some success has been achieved toward stimulating local agencies to consider future personnel needs.

Finally, in respect to the last purpose, since other studies will be undertaken in which local government manpower supply and needs will be a large part, it seems essential to spare future researchers some hurdles. This purpose is perhaps met with Chapter Two, the bibliography, and appendices.

Some of the above stated purposes have been achieved to a greater degree than others. In no case would it be asserted that this study has attained a definitive response to any of the stated project purposes; however, considering the resources that could be marshalled, we feel that this report makes a strong beginning. A more specific assessment is that a substantial degree of success has been achieved in meeting all goals, although to a lesser extent in the case of the third. Although the projections of manpower need are not as definitive as the researchers had hoped when the project began, they are a reasonable expectation of what the level of professionalism in Illinois local governments will be in 1975 for many occupations.

Overtones of Illinois PAT Manpower Problems

The reader should be explicitly cautioned that meeting the PAT manpower needs of local governments is not simply a matter of implementing curricula upon the basis of projected growth. First, it is not possible for Illinois universities and colleges to produce completely trained persons who can step into PAT positions immediately. Second, there are many external factors involved in the competition for trained personnel from universities and colleges. One of the most important of these external factors is that of national supply and demand. If a particular occupation is in short supply throughout the country, it is not likely that the educational system in the State of Illinois can effectively deal with the problem, as it affects Illinois local governments, by turning out more individuals in this occupation. The highly trained individual is extremely mobile, and it is not likely that Illinois local governments will be able effectively to recruit these individuals unless more vigor is applied in the recruitment process. Not only must salaries and fringe benefits of local government jobs be competitive with other levels of government and the private sector, but it seems that the image of local employment must be improved considerably. Local governments have not displayed an image of excitement and accomplishment to the young college graduate (see Chapter Eleven). More likely, the image of local government service has been that of the "party payroller." Whether this image is deserved by cities is questionable, but it is present and thus affects recruitment. The local government service needs a more favorable public image, among other things, if it is to recruit into its ranks the best of the young men and women graduating from universities and colleges.

One of the ways Illinois local governments might effectively recruit into their ranks the bright, young college graduate is to have an internship program that would combine work in a locality with academic training. A comparable program, the Legislative Internship Program of the Institute of Government and Public Affairs at the University of Illinois, has given a large number of students an appreciation for the working of state government. One of the by-products of this program has been that many of the persons in the internship program stay on with state government after they have served their internships. A comparable program run by a prestigious university could be especially beneficial to the medium-sized governments in downstate Illinois. The reason for suggesting a university-administered program is that neither the state nor local governments have the prestige and confidence of the young persons that would enable one of their programs to become highly competitive. In addition, most of the governments outside Cook County are too small to conduct a program on the scale being suggested. This problem of small governments might be solved to some degree by what a village manager for a Chicago suburb of about 20,000 suggested in our questionnaire. He stated that presently people in middle management usually have to be trained by each municipality. His suggestion was to train people through the joint effort and cooperation of a group of nearby communities. By taking the full training load off any single community, the efficiency of all the participating communities might increase as well as the possibility of a decrease in training costs.

A necessary follow-up to this report is for educational planners to evaluate existing state university and college programs that need to be implemented to meet the PAT manpower needs of local governments. This effort has already been accomplished in a related vein by Banowetz and Fugiel in their analysis of urban service involvement of state universities.[3] However, their report does not deal specifically and in detail with all of the occupations the present study has under consideration. Thus, educational planners might evaluate the present priorities for future programs in order to see how they will meet the needs projected in this report.

Another follow-up to this report that seems quite necessary is that of studying personnel needs in other public and private sectors. The occupations dealt with in this study are not exclusive with local governments in most cases. These occupations are found in the state and federal service in Illinois as well as in the private sector. The State Board of Higher Education or another agency should well consider studying the PAT manpower needs for these other levels of government and the private sector as has been done comprehensively in respect to the health function.[4] In the past year, the federal Department of Housing and Urban Development approached a number of state agencies in respect to doing such a study of manpower needs in other sectors, but plans had been made for the fiscal year and many agencies did not have the personnel to conduct such a study. The need for it still exists, however, and the State of Illinois should approach the federal Department of Housing and Urban Development in the near future about the funding of such a study.

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[3] James M. Banowetz and Peter J. Fugiel, "The Urban Service Involvement of Illinois Institutions of Higher Education" (a report prepared for consideration by a conference of Illinois educators, De Kalb, February 26, 1969), pp. 1-30.

[4] Illinois Board of Higher Education, Education in the Health Fields for the State of Illinois, Two Volumes, Springfield, 1968.

It should be emphasized that although we are eliminating occupations that require less than two years post-high school training from consideration in this report, local units would have a difficult time functioning if the personnel in such positions were of a mediocre or lesser quality. These occupations are being eliminated from consideration in this study not because they are unimportant to the functioning of local government, but because they do not fall within the defined boundaries that have been set. However, it is important that future needs for these sub-PAT occupations should be assessed by educational agencies within the State of Illinois. Of course, such occupations need not come solely within the purview of the State Board of Higher Education. In many cases, those employed in sub-PAT positions would not be trained by agencies in the State of Illinois under the overall jurisdiction of the State Board of Higher Education. We suggest that the need for such personnel be studied by both the Office of the Superintendent of Public Instruction and the State Board of Higher Education.

The reader should be also cognizant of any new developments that may affect the content of this report. For instance, the new federal program in the area of police protection, if substantially funded, could considerably alter the level of professionalism in this function. Also, there are a number of urban programs, such as Model Cities and others, that if financed at higher than current levels could considerably upgrade the professionalism of local governments in respect to community development. The six years between the present and 1975, may not seem like a very long time, but with the rapid change our society is presently experiencing, a number of intervening factors could occur that would significantly alter some or most of the statements made in this report.

This report is based upon empirical data, and to as great an extent as possible empirical findings will be reported to the reader. When speculation is engaged upon, we will not venture far from our sources of data and information. To the extent possible, the researchers assumed a somewhat detached position and analyzed PAT manpower needs objectively in terms of the problem given them by the State Board of Higher Education and the Department of Housing and Urban Development.

Chapter Two

METHODOLOGY

This chapter is an attempt to make explicit the major research procedures of the study. There are two purposes for this extended methodological statement. First, the reader of the substantive chapters will be apprised of the limitations and applicability of the findings. The findings of any research are dependent upon the methods employed in the study design, and thus the greater the reader's knowledge and appreciation of the methodology, the greater the understanding of the limits in applying and generalizing from the findings.

Second, future researchers of manpower and local governmental problems may be saved needless procedural problem-solving if an explicit legacy of major decisions is left in the record. Much professional, administrative, and technical (PAT) manpower research consists of reporting specific needs for PAT manpower, but without reporting the manner in which research has been conducted. The reportorial absence of research procedures makes it impossible to compare the findings of different studies, much less evaluate one study. This chapter is thus written for the critical layman and the interested professional researcher.

Early Stages of Research

Efforts undertaken during the first two months of the study were aimed mainly toward self-education. Reading, note taking, and bibliographical compilation in the literature of manpower studies were major time consumers. The literature examined at this stage contributed to the research design of the project, but it was soon apparent

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that none of the methodologies of previous studies would be directly useful in achieving our research purposes, for there did not exist any statewide studies of PAT manpower for all types of local government.

In a related effort aimed at generating ideas and effecting coordination with other research, approximately sixty national and state interest groups, state offices, regional officials of the federal government, and persons of reputation in the manpower field were contacted. Inquiries concerned whether the above organizations, agencies, and individuals knew of any completed or on-going research in their area of interest that focused on determination of PAT manpower supplies and needs of local governments. While most replies were negative, several were not and they made the effort worthwhile. One organization loaned our study its file on PAT manpower, the National Recreation and Park Association sent some preliminary findings of a nation-wide study of park and recreation employees, and others suggested several worthwhile leads. The products of these inquiries as well as the bibliography compilation and reading contributed to the direction of the study, but did not supply a ready-made design for research.

Study Design

As a guide to research, PAT manpower of local governments was defined as those full-time and part-time positions that required at least two years of post-high school training or equivalent experience before an individual could be considered. The hope was that complete data for full-time, part-time, and contractual PAT employment could be found so that current supplies and future needs data could be generated for all of these types of PAT manpower. However, the data later received in respect to part-time and contractual PAT manpower proved to be too incomplete for anything but selective analysis. Nearly every government in the survey employed some professional and technical assistance on a part-time or contractual basis, but these facts were irregularly noted on the returned questionnaires. Many governments did not include such occupations as auditors, planning consultants, and others.

At the outset it was decided that the projections of PAT manpower needs had to be in specifics if they were to be of much benefit for educational planners. Accomplishing the objective of making specific occupational projections caused immediate complications. The search of available data indicated that conventional employment statistics are not sufficiently detailed to permit occupational projections for local governments.

The United States Bureau of the Census, the most extensive reservoir of local governmental employment data, combines both PAT and other employees when it collects data on the functions of local government. In other words, the data in its rawest form contains all levels of occupations working within a function. For example, the category of parks and recreation may include clerical and janitorial support as well as the recreation specialists.[1] Thus, Census of Governments employment data is available in such a form that overall increases and decreases in employment can be examined by functional areas (highways, public welfare, etc.) but little else.[2] As a final word, it should be stated that the Census of Governments data collection procedures are reasonable when it is remembered that the Bureau of the Census is responsible for the census of over 80,000 governmental units in the United States.

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[1] Occupational data from the Census of Population of the Bureau and the occupational data of the Department of Labor are less helpful than the Census of Governments publications because the former two lump many types of employment into the category of "public administration."

Soon apparent in this study was that a survey effort was necessary because available data could not answer the research questions that had been posed. The project budget limited any systematic surveying to the mails. Furthermore, the researchers perceived that educational planners would prefer to have descriptive--rather than normative--projections of the numbers of PAT manpower local government would demand and hire in 1975. It was surmised that our sponsoring agency would be less interested in projections of PAT manpower that accord with idealistic goals that are inconceivable of being attained within existing structures and relationships.[3]

The previously mentioned problem of a lack of data concerning PAT manpower in local governments coupled with our decisions for a mailed survey and descriptive projections forced one of the most important project decisions. This decision called for local officials to project their PAT needs for the year 1975 (this year had been agreed upon by the Department of Housing and Urban Development and the State Board of Higher Education before the study began). We felt that this procedure would not present much difficulty because 1975 is not so far into the future that competent local officials could not make accurate projections based on past levels of operations.

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[2] The Census Bureau received a grant in August of 1968 from the Department of Housing and Urban Development to "provide HUD basic data on urban public sector manpower which will enable planning officials to make sound projections as to number of employees and kinds of administrative, professional, and technical skills required for economic and efficient community development." The overseer of this project in the Census Bureau has indicated that the Illinois project will be completed before Bureau research results will be completed.

[3] For a more extended statement differentiating normative and descriptive projections, see Garth L. Mangum and Arnold L. Nemore, "The Nature and Functions of Manpower Projections," Industrial Relations, 5 (1966), pp. 3-5.

The researchers were not overjoyed with the prospect of relying upon the subjective judgment of local officials because most local governments have all they can do to keep up with current operations and problems, much less plan for future needs. Ever present with this type of approach are difficulties related to inflation of needs and the reluctance to project on the part of reporting officials. Yet there are a number of means that can be employed to check accuracy and compensate for data interstices.[4]

After problems concerning scope and method were resolved, a questionnaire was constructed that covered thirteen functions performed by local governments.[5] Within these categories, approximately one hundred occupations were listed to aid local officials in completing the questionnaire.[6] For each occupation, data were requested for: (1) the level of education required (2-4 years post-high school training, Bachelor's degree, or graduate study); (2) budgeted full-time positions (filled and unfilled); (3) average budgeted monthly salary; (4) required employment in 1970 and 1975; (5) difficulty of filling a position (whether it is: not very difficult, difficult, or very difficult); (6) recruitment area (whether the position: can be recruited from Illinois, can be recruited from Illinois but difficult, or cannot be recruited from Illinois); and (7) whether adequate personnel could be obtained through in-service training.

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[4] The projections of local officials are evaluated later in this chapter.

[5] See Appendix A for a copy of the questionnaire.

Age and Tenure Data

Since the present undertaking is a study of many local governments, budget considerations precluded systematically collecting data on two important manpower variables: age of current employees and tenure in position. Data of this nature are extremely difficult to obtain. If a locality is extensively bureaucratized, then it may be possible to find age and length of service information in a central personnel office, but most Illinois local governments are not that well organized.[7] Thus, age and length of service information tends to be as diffuse as the records of the locality are diffuse.

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[6] Some of our professional colleagues suggested that we include a listing of occupational definitions along with the occupational titles in the questionnaire. At the time of the questionnaire construction, we felt that the questionnaire was already complex enough, and that adding five pages of occupational definitions would scare off more respondents than the added clarity to the fewer returns would have been worth. Thus, the listing of occupational definitions was omitted. Only one local official felt that the questionnaire "should include a definition of job listings since job titles differ from area to area." This official only had three PAT employees in his jurisdiction.

To overcome this difficulty, a researcher would be required to pursue one of three alternatives: field research, a mailed questionnaire to individual employees, or requesting that local officials collect the data. Extensive field work was dismissed as a realistic possibility by reason of limitations in staff and travel budget, while surveying with self-administered questionnaires to individual employees was precluded due to the time required to collect a representative sample of PAT employees, which would have been in addition to all other project tasks. The third alternative, that of asking local officials to collect these data, was dismissed because of the inordinate amount of time they would thus be required to contribute. Time expended in collecting these data would have been in addition to the time required for providing already extensive data we had hoped local officials would supply.[8] In sum, accurate information of this nature is of utility when projecting future needs; however, time and budgetary limitations channeled the study in other directions.

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[7] Evanston is one of the few middle-sized cities in Illinois that has a separate personnel department. In nearly all other cities, the personnel function is performed by the mayor, manager, or finance officer in addition to other duties.

[8] Stanley and his associates were able to collect reliable age and length of service data; however, they were favored in that they had to work with only one government, even if that one was the City of New York. See David T. Stanley, et al., Professional Personnel for the City of New York (Washington, D.C.: The Brookings Institution, 1963), pp. 33-37.

Assumptions of Research

There is a general assumption that the nature of Illinois local government will not change radically by 1975. This assumption is composed of three more specific assumptions that were consciously explored in the study design. The first is that there is likely to be little governmental reorganization before 1975 that will affect PAT manpower levels in local governments. If the proliferation of townships and special districts (presently at 3,745, which is the largest number in the country) were consolidated into the existing structure of counties and municipalities, the result would be larger and more efficient operations. Accordingly, the remaining governmental units could more economically hire PAT manpower to perform local government functions. However, our professional assessment is that the changes wrought by the coming Constitutional Convention will not radically alter the structure of Illinois local government. If the Convention effects some reorganization and consolidation of local government, it will probably not be of a magnitude that would affect many of the trends that we report.

The second assumption is that the adoption of technology in the performance of local governmental functions will not be accelerated to a great degree before 1975. In other words, it is our belief that the demand for professional skills in local government will follow past trends.[9] Finally, the assumption is made that there is not to be an economic depression or other major catastrophe.

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[9] For a detailed justification of this assumption, see The Michigan Manpower Study: An Analysis of the Characteristics of Michigan's Labor Force in the Next 15 Years, by The Battelle Memorial Institute (Columbus, Ohio, 1966), pp. 25-27.

Other Data and Surveys

In addition to the data collected through our mailed questionnaire, more general employment and expenditure data collected by the United States Census Bureau has been assembled and analyzed for the years 1957, 1962, and 1967.[10] With these data, employment by functions in counties and regions, and growth for counties, regions, and function have been computed. Since our questionnaire mainly corresponds to Census Bureau categories, the two sets of data supplement each other.

In an effort to learn of local government PAT manpower recruitment from a different perspective, the placement bureaus of major universities in Illinois were surveyed.[11] As a means of further corroboration, all the professional trade journals in Illinois subscribed to by the Southern Illinois University's Morris Library were examined for what light they could shed on PAT manpower needs. The placement bureau survey and the journal study contributed somewhat to our knowledge of PAT manpower problems and will be referred to where relevant in the body of the report.

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[10] U. S. Department of Commerce, Bureau of the Census, Government in Illinois (Washington, D.C.: U. S. Government Printing Office, 1959 and 1964), and work sheets provided by the Governments Division of the Bureau for the 1967 Census of Governments.

[11] See Appendix A for questionnaire and Chapter Eleven for some of the findings.

Sampling Procedures

Illinois presents difficulties in mail surveys because it has more units of local government than any other state, with 6,453. Of this total, 1,250 are local school districts and were automatically excluded from the scope of this study. This means that supply and need for PAT manpower is located within the other 5,103 local units.[12] The problem can be placed in perspective by commenting that the state with the second largest number of local governments other than school districts is Pennsylvania with 4,249, while Idaho is the median state with 751 local governments other than school districts. Thus, if this project were assessing the PAT manpower need in Idaho's local governments, it would be a relatively easy matter to send 751 questionnaires. However, the problem at hand is local PAT manpower in Illinois.

The researchers were quite confident that a large number of the local governments within the state did not employ any personnel who were required to have at least two years of post-high school training, because most of the more than 5,000 local governments are very small operations. In the case of special districts, for instance, 61 percent have no full-time employees.[13] Even with only a few employees the governments are not complex enough to require trained personnel. It is only when governments hire large numbers of personnel or are quite specialized in their operations that they begin to hire full-time PAT personnel.

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[12] Regional agencies chartered by the State of Illinois such as regional planning agencies are considered state agencies and thus outside the scope of this study.

[13] U. S. Bureau of the Census, Governmental Organization: 1967 (Washington, D.C.: U. S. Government Printing Office, 1968), p. 76.

On the basis of such assumption, the project researchers began to think of cut-off levels below which local governments probably would not hire PAT manpower. Early in the research, personal visits were made to assess employment requirements of a dozen or so local governments in Jackson, Williamson, and Union counties. The visits to these units (chosen because of their proximity to the researchers) proved fruitful because some of them ranged above tentative cut-off points that were under consideration. In respect to several municipalities of the 4,000 to 10,000 population range, it was found that there were one or two persons on the payroll that might qualify within our definition of a PAT occupation by reason of salary; however, there were no formal or informal training requirements for the positions. On the other hand, the researchers were aware of higher educational and training requirements for municipalities of comparable size in the Chicago area.

Special problems confront the researcher who undertakes to study townships and special districts as well as counties and municipalities within an entire state. At present, the only state records that approach comprehensiveness concerning townships and special districts are the compilations of tax levies by the Department of Revenue, and even so, these listings do not include all special districts. Special districts that receive their operating revenues from charges made to those who use their services, such as the Chicago Port District, and those that receive substantial operating revenues from other levels of government, such as health districts, may not be noted in the Department's report.

Budgeting information would have been helpful in determining cut-off points which would have allowed the inclusion of all governments with PAT personnel in a survey. However, there is not a single office of Illinois state government that has this information. In fact, no Illinois agency has a list of all special districts in the state. Thus, the townships and special districts chosen for the survey were chosen mainly from the incomplete lists of the Department of Revenue.[14] A listing used by the Census Bureau in its 1967 Census of Governments was used to supplement the original number of special districts selected.

After an investigation of service levels of local governments in the state, the decision was made to mail questionnaires to all counties, municipalities over 2,500 in population, townships with a tax extension of over $100,000 and special districts with a tax extension over $35,000 (supplemented by nearly 100 districts from the 1967 list of the Census Bureau).[15] The number of governments to be surveyed totaled 979 or 19 percent of Illinois' local governmental units. The total included 102 counties, 340 municipalities, 145 townships, and 392 special districts. The number of governments surveyed in each county can be found in Figure 1 of this chapter.

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[14] Illinois Department of Revenue, Illinois Property Tax Statistics: 1966 (Springfield: 1968), pp. 53-86.

[15] The project researchers are confident that governments below the cut-off points do not have PAT manpower in their employ and would not anticipate the need for PAT manpower before 1975. The only exceptions may be a few municipalities in the high growth area of Northeastern Illinois. The establishment of these cut-off points was reinforced by telephone interviews with selected local units just below the points.

Pretest

In order to test more systematically some of the research assumptions, a pretest was conducted with 93 governments above and below the previously mentioned cut-off points. Questionnaires were mailed to 11 counties, 24 municipalities, 31 townships, and 27 special districts. The response was a disappointing, although not totally unexpected, 22 percent return.

From this experience, it was concluded that the questionnaire could be completed satisfactorily by a conscientious respondent, and that only minor modifications had to be made on the questionnaire itself. Also, none of the responding governments below our cut-off points reported any full-time PAT manpower, which reinforced our confidence that there were few or no PAT employees in the local governments that were not to be mailed questionnaire. However, the low rate of response was convincing evidence that a number of adjustments had to be made in the sampling techniques. Accordingly, endorsement from statewide county, municipal, township, and functional associations was sought and obtained, and addresses were checked for accuracy and personalized within the limits of our knowledge.

DATA COLLECTION

Mailing and Receiving the Questionnaire

After adjustments were made to correct problems encountered in the pretest, a first-class letter was mailed to all governments to be included in our survey. This letter introduced our survey to the localities and informed them that our questionnaire would soon be forthcoming. The first mailing of the questionnaire along with appropriate endorsements was completed on November 14. At the time of this mailing, standard survey techniques were adjusted slightly. More specifically, the researchers included results of the pretest from units above the cut-off in the general survey for purposes of analysis. The reasoning was that this procedure would introduce only the most minor biases because the pretest and the first general mailing were mailed only one month apart and used, for all practical purposes, the same questionnaire.

The response rate stood at approximately 27% on December 10 from the November mailing. A follow-up was made by mail on December 14. This mailing included non-respondents from the November mailing as well as those in the pretest that fell above the cut-off points.

Cook County and Chicago

Special means were used to survey the giant governments of Cook County and the City of Chicago. The government of Cook County was surveyed as 34 component units. For 23 of the units directly under the supervision of the

President of the Cook County Board of Commissioners, the President of the Board, Richard B. Ogilvie (now Governor of the State of Illinois) included a letter of endorsement with the questionnaire. In respect to the City of Chicago, the Civil Service Commission served as the secondary survey agent. Dr. Charles A. Pounian, Executive Director of the Commission, assumed the responsibility of sending and collecting questionnaires, for the various departments.

Techniques Used to Increase Response

By the middle of December, it became apparent that the rate of response would not be sufficient for the analysis we had hoped to employ. Thus, the remainder of the follow-ups were of a more personal nature. During the last two weeks of December, governments in the Chicago region (Cook, Du Page, Kane, Lake, and Will counties) were telephoned from a central location in the Village of Western Springs. Governments in the above counties were blanketed with calls. In addition, non-responding municipalities over 10,000 in downstate Illinois were telephoned in early January. Our data collection efforts ended in late January when personel visits were made to all municipalities over 15,000 in the Chicago area. The telephone calls and visits were generally short and intended to persuade officials to complete the questionnaire, rather than as in-depth data-gathering endeavors. Funds available for travel allowed only minimal field work.

ANALYSIS OF DATA

To follow is our assessment of the representativeness of the responding governments, knowledgeability of the local respondents and the quality of their responses, and the study purposes that can best be fulfilled with the collected data.

Rate of Return

The overall rate of response is 45 percent. However, the response rate is more encouraging than may at first be apparent. In the case of health and hospital services, early inquiries failed to uncover a definitive study of health needs in the State of Illinois.[16] Later one came to our attention, after the first mailing, so that no effort to follow-up in health and hospital districts was made. Thus such districts could reasonably be omitted from the total survey, an omission which would improve the response rate.

Additionally encouraging was the idea that governments without PAT manpower were those most likely not to respond. For instance, only 30 percent of the townships and 31 percent of the fire protection districts returned questionnaires. The information received from these respondents informed us of what we suspected, i.e., these governments have little or no PAT manpower in their employ. In fact, many localities considerably above the cut-off points indicated that a PAT manpower study had little relevance to units of their size. Typical of this reaction was the comment of the City Clerk of a Southern Illinois city

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[16] State Board of Higher Education, Education in the Health Fields for the State of Illinois, June, 1968, Volumes I and II.

Table I

QUESTIONNAIRE COMPLETION BY TYPE OF GOVERNMENT

(0) -- all numbers in parentheses represent percentages

Part A

RESPONSE RATE FOR COUNTIES SURVEYED, BY POPULATION*

(Excluding Cook County)

	Under 25,000	25,001-50,000	50,001 100,000	Over 100,000	Total
Units Surveyed	57	22	9	13	101
Returned	13 (23)	7 (32)	5 (55)	9 (69)	34 (34)

* Includes Departmental follow-ups for larger counties which has resulted in scattered returns for some of the larger counties.

Part B

RESPONSE RATE FOR MUNICIPALITIES SURVEYED, BY POPULATION

	2,500 - 7,500		7,501 - 15,000		15,001 - 25,000		25,001 - 50,000		50,000 & Over		Total
	Urban* County	Non-Urban	Urban	Non-Urban	Urban	Non-Urban	Urban	Non-Urban	Urban	Non-Urban	
Units Surveyed	78	89	49	25	34	12	26	8	19	--	340
Returned	37 (47)	27 (30)	21 (43)	17 (68)	26 (76)	9 (75)	20 (77)	7 (88)	16 (84)	--	180 (53)

* For purposes of this project, the following counties have been classified as urban: Champaign, Cook, Du Page, Kane, Lake, Macon, Madison, Peoria, Rock Island, St. Clair, Sangamon, Tazewell, Will and Winnebago.

Table I

Part C

RESPONSE RATE FOR TOWNSHIPS SURVEYED, BY TAX EXTENSION

	$100,000 - $200,000		$200,001 - $300,000		Over $300,000		No Information	Total
	Urban* County	Non-Urban	Urban	Non-Urban	Urban	Non-Urban		
Units Surveyed	43	42	16	9	24	1	10	145
Returned	12 (28)	13 (31)	2 (13)	4 (44)	8 (33)	1 (100)	4 (40)	44 (30)

* See explanation in Part B.

Part D

RESPONSE RATE OF SPECIAL DISTRICTS, BY TYPE

	Airport	Conservation	Fire	Forest	Health & Hospital	Housing	Library	Park	Sanitary	Water	Other	Total
Units Surveyed	25	20	44	9	37	53	18	107	30	38	11	392
Returned	9 (36)	11 (55)	16 (36)	3 (33)	15 (41)	21 (40)	12 (67)	59 (55)	20 (67)	17 (45)	3 (27)	186 (47)

of approximately 9,000 population: "I feel this report would be more suited to a much, much larger city . . . ."

In respect to municipalities, the overall rate of response is 53 percent (Part B of Table I). For those municipalities over 15,000 population, the rate of response is a quite respectable 80 percent.[17] Most important is that within the 80 percent figure is included the return for the City of Chicago. Less encouraging than the rate of response for municipalities has been that for counties. The overall rate of county return is approximately 34 percent. And some of the county returns do not reflect the entire scope of the county's government because the lack of a central executive has fostered a scattered departmental compliance. Yet, the researchers are pleased that data of considerable utility has been returned from Cook County. Responses have also been received from such large special governments as the Metropolitan Sanitary District and the Chicago Transit Authority in the Chicago area so that all of the governments which could have caused unpardonably large data gaps have responded.

Demands of Questionnaires on the Time of Local Officials

Considering the time required to respond to our questionnaire if the locality is large, the researchers are quite pleased with the cooperation which the study received.

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[17] The rate of response by form of municipal government was surprising in that commission and manager forms of government over 15,000 in population returned at practically an identical rate, 78 and 79 percent, respectively. We expected the more professionalized managerial governments to return at a significantly higher rate. For a listing of cities falling in either category, see Paul Powell, Secretary of State, Counties and Incorporated Municipalities of Illinois (Springfield: March 1, 1968), p. 27.

Our pleasure with the rate of response can be emphasized by noting that competition from other questionnaires to local governments has been intense. In fact, the number of questionnaires to local governments is so high, that we are reaching a competitive point where diminishing returns is the consequence. Thus, the researchers have concluded that their rate of response could never have been achieved had the study not received the endorsements of statewide local organizations, and had not telephone and personal visits aimed at convincing local officials of the importance of the study been utilized to supplement mailings.

A point that was made repeatedly to the researchers is that mailed questionnaires are increasingly becoming a burden upon Illinois local officials. This problem was a continuous topic of conversation in the telephone and personal visit follow-ups. A written comment is typical of the problem faced by many localities: "At the present, we have so many requests for this type of information that it is taking approximately ten percent of my staff's time to prepare it." Comments such as the above may foreshadow the day when researchers will not be able to secure sufficient returns to do local government surveys. There seem to be certain possible solutions to this problem. First, sponsors of research should discourage survey research if adequate data is already available. Second, localities, through their statewide organizations, should be educated concerning the benefits of research. To the point of irritation, the researchers read and heard comments that there is little benefit to local governments from various research projects.

Statewide organizations and researchers themselves should make localities aware that research is considered when public policy is made. Third, efforts to combine questionnaires should be strongly encouraged when it is feasible.

Officials Completing the Questionnaire

The questionnaires were mailed initially to the county, municipality, and township clerks, and to the special district addresses provided by the United States Census Bureau. In the instructional cover letter, the local official was requested to complete the questionnaire in cooperation with the planner, manager, and/or budget supervisor of the locality. The reasoning was that the questionnaire would be completed in the most satisfactory manner if responses were obtained from the more professionally oriented personnel, that is, professionally oriented officials would be more likely to have an awareness of PAT manpower problems.

As may be seen in Table 2, the questionnaires have been completed by a substantial number of administrators most concerned with matters of personnel. In the municipalities over 15,000, managers, finance officers, personnel administrators, planners, and other administrators completed the questionnaires twice as often as city clerks. Also, in some of the larger municipalities, the clerk surveyed appropriate departments and his signature means that he is merely the official who mailed the completed questionnaire. For municipalities under 15,000, the questionnaires were completed for the most part by the city clerks.

The quality of the responses on the returned questionnaires varies from poor to excellent. Fortunately, most of the responses fall into the categories of good and

Table 2

OCCUPATIONAL POSITION OF RESPONDING OFFICIALS
(0) -- all numbers in parentheses represent percentages

	Municipalities		Counties		Townships	Special Districts	Total
	Over 15,000	15,000 & Under	Over 50,000	50,000 & Under			
Manager	20 (26)	10 (10)	0 (-)	0 (-)	0 (-)	20 (11)	50 (11)
Clerk	19 (24)	55 (54)	1 (8)	13 (65)	25 (57)	3 (2)	116 (26)
Financial Officer	14 (18)	14 (14)	2 (15)	1 (5)	0 (-)	12 (6)	43 (10)
Personnel Administrator	5 (6)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	5 (1)
Other Administrator	7 (9)	2 (2)	2 (15)	1 (5)	0 (-)	70 (38)	82 (19)
Functional Specialist	1 (1)	0 (-)	1 (8)	0 (-)	0 (-)	13 (7)	15 (3)
Other Elected Official	2 (3)	5 (5)	1 (8)	2 (10)	15 (34)	37 (20)	62 (14)
None Noted	10 (13)	16 (16)	6 (46)	3 (15)	4 (9)	31 (17)	70 (16)

adequate. There seems to be little argument that the above named professional administrators are the best qualified local officials to answer questions concerning PAT manpower. However, some of our professional colleagues' criticisms should be anticipated by saying that personal visits to localities in the Jackson, Williamson, and Union County areas as well as the visits to many of the Chicago suburbs have convinced us that a number of county and municipal clerks have a good to excellent grip on the personnel problems of their localities.

In the case of counties, most of the respondents have been the chief administrators of various departments. The only regret concerning county responses is that it has not been possible to achieve a greater rate of response. The respondents from the townships and special districts usually reflect the degree to which these localities possessed PAT manpower. For example, most of the questionnaires returned by the larger park districts were completed by the director of the district rather than a board member.

Level of PAT Manpower for Non-Respondents

An effort has been made to determine how the level of professionalism of the non-responding governments varied from that of the respondents. The ninety-nine municipalities over 15,000 in population (excluding Chicago) were ranked from largest to smallest. Using the Illinois Municipal League's compilation of high level municipal officials,[18] the researchers noted eight positions in the directory as the occupations that most often demand educational requirements.

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[18] Illinois Municipal Directory (Springfield: Illinois Municipal League, 1967), pp. 1-84.

The positions under consideration were: manager, administrator, municipal engineer, traffic engineer, planning engineer, personnel officer, purchasing agent, and comptroller-finance officer. It was reasoned that the level of professional, administrative, and technical employment would be reflected in the number of individuals larger municipalities employ in the above eight occupations.

It has been further reasoned that the 23 non-responding municipalities would be little different than the 75 responding municipalities if similar numbers of professionals are employed by both groups. Since we know that population size affects the rate of employment of the occupations under consideration, the researchers devised a special method to determine how the non-respondents differ from the respondents, in terms of PAT employment. For each of the 23 non-responding municipalities, we totaled the number of individuals holding the eight occupations for the five municipalities larger and smaller than the non-respondent, then divided by ten (the total of municipalities). This number was in turn used to represent the professionalism of a particular size of municipality, for example, the ten cities excluding the non-respondent under consideration in the class 55,000 to 82,000 was computed as four.

This mean is then subtracted from the number of occupations the municipality has noted it employs. Carrying through on our example, the largest non-responding municipality (about 67,000) reported that it had five individuals performing these occupations. Thus, the figure of +1.0 indicates that the non-respondent may be more professional than the other cities in its class. However, when the same computations were performed for all twenty-three non-responding municipalities, the non-respondents rated an overall -.25.

The above figure indicates, as expected, that the level of professionalism in the non-responding governments is less than that of the respondents. Yet, a deviation of .25 of an employee is quite a small deviation when it is remembered that the average number of such employees for the ninety-seven municipalities is two. To interpolate the above finding to our estimates of supply and projections, we are roughly estimating the level of PAT manpower in the non-responding municipalities at only 7/8 the level of the respondent--controlling for population.

Evaluation of Projections

As previously discussed, detailed data concerning PAT occupations in Illinois local governments does not exist and local government officials have been relied upon for estimates of future growth. Most administrators of Illinois localities are so pressed to meet immediate obligations that little time remains to consider the future. Contrary to what may be expected, even many of the larger governments and agencies have not considered future manpower needs. For instance, one of the largest (and most cooperative) Cook County agencies responded that it did not know how many PAT employees would be needed in 1975. "How many in 1975? We do not know."

From the number of returned questionnaires without notations in the projection sections, it is apparent that local officials are not completely at ease when projecting future personnel needs. Most of the local officials who completed the projection sections did so on the basis of estimates of past levels of operations. Even making relatively short term projections turned out to be difficult for a few officials because of the lack of good records. An official of a medium sized special district noted his frustration with the following comment: "How can (a) man tell where he is going when he does not know where he has been?" The researchers suspect that, if anything, the projections made by local officials have been underestimates rather than overestimates. The general restraint in projecting future needs seems to be a result of the projectors looking at past rates of growth too closely. Future personnel requirements have been made on the basis of the past demands for PAT manpower; however, future technological development, placement of personnel hired in the 1930's, and new federal incentives such as in the area of police protection will accelerate the demand for PAT manpower in local governments by 1975. Thus, the possible influence of outside factors not apparent to the projectors is considered in the text of the report by the researchers.

Localities in Illinois have come increasingly under the purview of area planning agencies, but to date, few of the planning agencies have considered PAT manpower within the jurisdiction of their concern. Planners, as previously mentioned, would quite likely approach the present study in a manner such that projections would be made on the basis of what localities would need using their professional criteria. That is, planners are most inclined to project on a normative basis since they reason that localities will not adapt to greater professionalism unless there is a plan which can be used as a guide to change.

As worthwhile as the above described approach may be in many circumstances, it did not seem entirely appropriate for the present study, because its data is to be used mainly for curricula development. Thus, unless otherwise stated, all projections are the numbers of an occupation that we believe will be budgeted for Illinois local governments in 1975. In addition, we have used regression analysis on the functional data of the Census Bureau so that the discussion of any functions contains figures on overall projected growth.[19]

ANALYSIS OF CENSUS BUREAU DATA

Supplementing data from the mailed survey is local government employment data collected by the U. S. Bureau of the Census. Data from the 1957, 1962, and 1967 Census of Governments are used in the report to set the boundaries in any functional discussion. The Bureau data has been used to examine several aspects of Illinois local government employment. They are: (1) location of local government employees; (2) past growth of public employment in selected county areas and regions; and (3) the projected growth in various functional areas for the year 1975. These data permit an assessment of employment trends in regions outside of Cook County that is not possible with the data collected on the mail questionnaires. It is possible to accomplish these purposes with the Census Bureau data because the Bureau had greater time flexibility and more extensive finances to send researchers into the field to collect data from non-responding localities as well as having the facilities for running extensive checks on the data. The present project had neither the resources nor the time for such extensive data gathering procedures.

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[19] For a detailed discussion of the regression techniques employed and the statistics generated, see Appendix B.

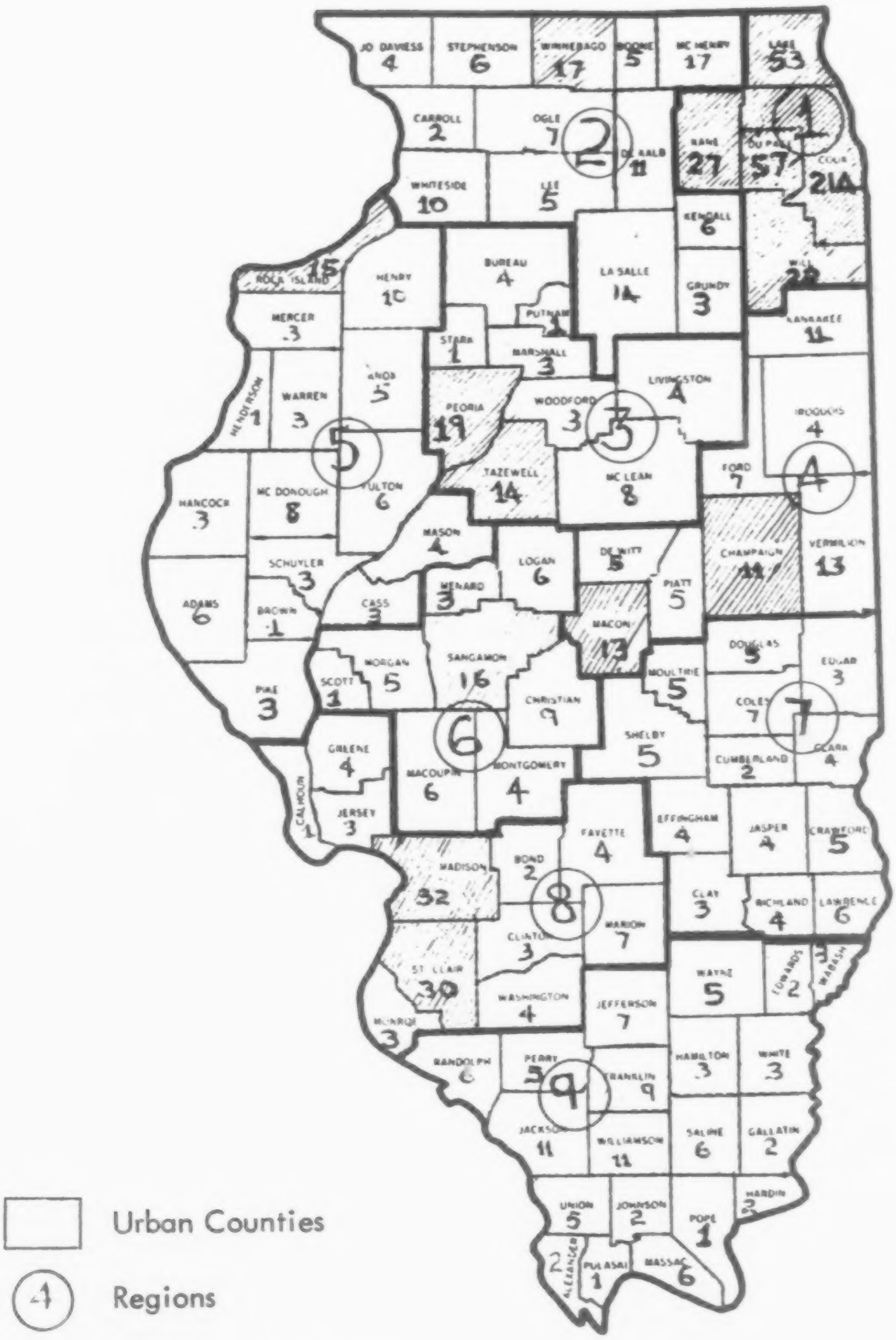
Regional Divisions

Keeping in mind that the information compiled in this study is to be used by persons planning educational curricula to meet local government manpower needs, the researchers divided the state of Illinois into nine regions for the purposes of analyzing Census Bureau data. Each region of the state contains one major state university so that if the Board of Higher Education decided to implement in-service training programs and full-time institutes through these universities, there exists information concerning functional employment patterns and growth in each of their regions.

All of the regions except seven and nine have at least one urban county. Region One which includes Cook County has five urban counties. Region One has about 65 percent of the total number of local employees throughout the state in any one function, and in some cases, has over 90 percent of the total statewide employment for a function. Even though most of Kane County is closer to Northern Illinois University at DeKalb, Kane County has been included in the grouping with Cook, Lake, Du Page, and Will counties because most of the populous local governments in Kane County are located along the eastern border. Thus, in-service training programs might be easier accomplished in conjunction with programs developed in the other four counties. There is an assumption in respect to Region Six that the new Sangamon State University will be an on-going operation in the next few years and

Figure 1 -

GOVERNMENT UNITS SURVEYED IN COUNTY


JO DAVIESS 4
STEPHENSON 6
WINNEBAGO 17
BOONE 5
MC HENRY 17
LAKE 53
CARROLL 2
OGLE 7
DE KALB 11
KANE 27
DU PAGE 57
COOK 21A
WHITESIDE 10
LEE 5
KENDALL 6
WILL 22
ROCK ISLAND 15
HENRY 10
BUREAU 4
LA SALLE 14
GRUNDY 3
PUTNAM 1
MERCER 3
STARK 1
MARSHALL 3
KANKAKEE 11
HENDERSON 1
WARREN 3
KNOX 5
PEORIA 19
WOODFORD 3
LIVINGSTON 4
IROQUOIS 4
HANCOCK 3
MC DONOUGH 8
FULTON 6
TAZEWELL 14
MC LEAN 8
FORD 7
MASON 4
LOGAN 6
DE WITT 5
CHAMPAIGN 11
VERMILION 13
SCHUYLER 3
ADAMS 6
BROWN 1
CASS 3
MENARD 3
PIATT 5
MACON 13
DOUGLAS 5
EDGAR 3
SCOTT 1
MORGAN 5
SANGAMON 16
CHRISTIAN 9
MOULTRIE 5
COLES 7
PIKE 3
SHELBY 5
CUMBERLAND 2
CLARK 4
GREENE 4
MACOUPIN 6
MONTGOMERY 4
CALHOUN 1
JERSEY 3
FAYETTE 4
EFFINGHAM 4
JASPER 4
CRAWFORD 5
MADISON 32
BOND 2
CLAY 3
RICHLAND 4
LAWRENCE 6
CLINTON 3
MARION 7
ST CLAIR 30
WAYNE 5
EDWARDS 2
WABASH 3
WASHINGTON 4
JEFFERSON 7
MONROE 3
RANDOLPH 6
PERRY 3
FRANKLIN 9
HAMILTON 3
WHITE 3
JACKSON 11
WILLIAMSON 11
SALINE 6
GALLATIN 2
UNION 5
JOHNSON 2
POPE 1
HARDIN 2
ALEXANDER 2
PULASKI 1
MASSAC 6
1
2
3
4
5
6
7
8
9
Urban Counties
4
Regions
Regional Boundaries

will have the faculty to conduct adequate programs for local governments in the area as well as for state employees. Figure I outlines the boundaries of counties and regions, designates urban counties, and notes the number of governments that we have surveyed in each county. Although boundaries have been drawn for regions in such a way as to include a state university in each region, this is in no way a suggestion that training programs, institutes, and new programs should be conducted exclusively by large state universities. In fact, if junior colleges, private groups, private universities, or state government have the resources and the desire to conduct adequate programs, we see no reason to exclude these organizations from such programs as Title VIII, Title I, and other urban service programs.

Chapter Three

TRENDS OF GOVERNMENT EMPLOYMENT IN THE UNITED STATES AND ILLINOIS

The demand for PAT manpower in Illinois local governments in the 1970's can be better understood if it is conceived of as an aspect of a much larger phenomenon, that is, the well-established trend toward increasing performance of service functions by government. Soloman Fabricant has suggested that this growth trend in public employment has been underway since at least 1870.[1]

In the Twentieth Century there has been a steady rise in the percentage of the total civilian work force that has been employed in government service. In 1919 less than one of ten civilian workers was employed in the government service, whereas today approximately eighteen of one hundred workers are employed by some level of government. While the percentage increase is impressive, the increase in the absolute numbers of employees is astounding. As can be observed in Table 3, the increase in governmental employees has been nearly fourfold since 1919 with approximately ten million people in the United States employed by all levels of government.

The creation of governmental programs is a response to demands made from outside or within the government. The type of demand, reaction to the demand, available resources, and other variables will determine the quantity and quality of public employees who perform governmental functions. Various

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[1] Soloman Fabricant, The Trends of Government Activity in the United States Since 1900 (New York: National Bureau of Economic Research, 1952), p. 14.

41

Table 3

Comparison of Public and Private Civilian Employment: 1919-1967 ***
(all figures in thousands)

	Total	Private*	Govt.**	% Govt. Emp.
1919	26829	24158	2671	9.95
1927	26691	26774	2917	10.92
1934	25699	22401	3298	12.83
1938	28902	25026	3876	13.41
1942	39779	34296	5483	13.78
1946	41287	35692	5595	13.55
1952	48303	41694	6609	13.68
1957	52162	44536	7626	14.61
1962	55515	46625	8890	16.01
1967	66063	54447	11616	17.58

* Excludes agricultural workers, self-employed, and domestic.

** Excludes personnel of the armed forces.

*** See U. S. Bureau of the Census, Historical Statistics of the United States: Colonial Times to 1957 (1960) Series D48-56, p. 73 and Statistical Abstract (1965 and 1968) p. 220 and p. 219, respectively.

factors have been suggested as instrumental in governmental growth. Some are: population, crisis situations, grants-in-aid programs, rising income, and rising birth rates. The above factors are neither the exclusive factors responsible for the growth in public employment nor are they discretely independent of each other. Thus, it would be difficult to ascertain with any degree of precision the degree to which any one contributes to governmental employment growth. However, a brief discussion of each of these factors should serve as a limited explanation.

It seems logical to hypothesize that overall population increases would necessitate increasing governmental employment for no other reason than keeping services at existing levels. Orville Poland finds not only a consistent relationship between population and public employment generally, but also finds state and local employment to be related to population.[2]

One of the most prominent examples of a reaction to a crisis situation was the New Deal response to the Great Depression of the 1930's. During this period the role of the government in our society was substantially altered. The federal as well as state and local governments assumed new functions that required them to expand employment. The creation and expansion of the social security system alone has had substantial impact on public employment levels.

Closely associated in many minds with the experience of the 1930's is the accelerated growth in the federal grants-in-aid programs. The creation and expenditure growth of federal and state grants-in-aid programs have surely contributed to the growth of local government employment. To elaborate, the total federal expenditures for grants-in-aid in 1927 amounted to only 123 million dollars, but by the year 1934, this category of expenditures had grown eight-fold to 976 million. After World War II, the trend of increasingly larger grants-in-aid to state and local governments was resumed and has since continued steadily.

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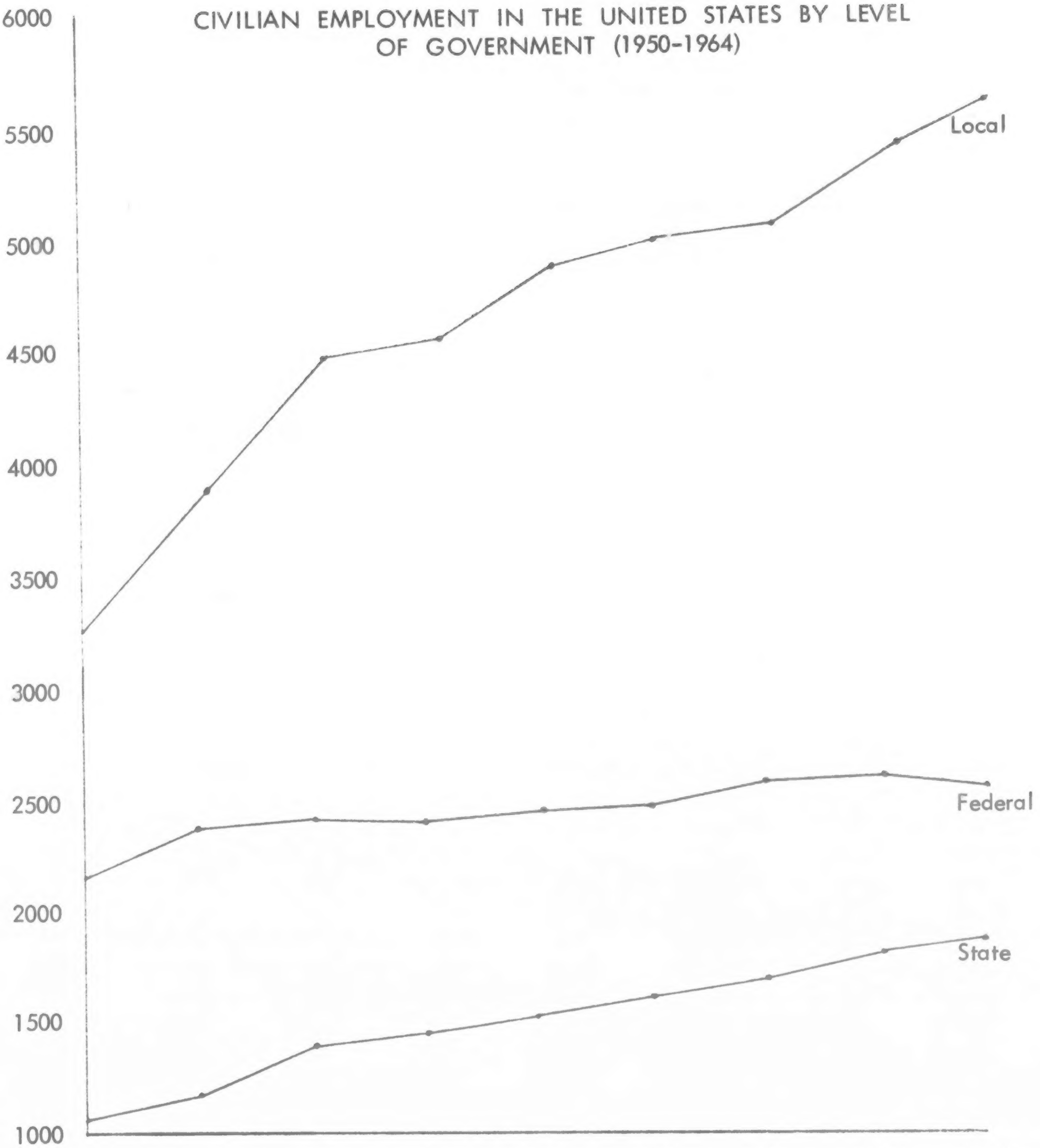
[2] Orville F. Poland, Public Employment in California (Berkeley: Institute of Governmental Studies, University of California, 1964), pp. 48-50.

Figure 2



CIVILIAN EMPLOYMENT IN THE UNITED STATES BY LEVEL OF GOVERNMENT (1950-1964)

Source: Statistical Abstract of the United States (1965), p. 440.

More specifically, 15.2 billion dollars was allocated in 1967, nearly a fourfold increase from the 1957 figure of 3.9 billion.[3] Finally, other factors such as rising levels of income and increases in the post World War II birth rate have made contributions to rising levels of public employment. In respect to rising income, publics make greater demands for governmental services when they possess greater wealth.[4] In other words, government spending is related to the wealth of its constituency. Further, our analysis of returned questionnaires supports the contention that the level of professionalism in local government is strongly related to the resources available in localities.

Employees in state and local governments have been increased at a more rapid rate than in the federal government. In 1950, state and local governments accounted for 4.3 million employees while the federal government accounted for 2.1 million, whereas in 1964 state and local governments employed 7.5 million while the federal government employed 2.4 million. Considering the period 1950-1964 (See Figure 2), local government employment in the United States has increased 75 percent, whereas federal employment has increased only 14 percent.[5]

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[3] Historical Statistics of the U. S., p. 725, and Statistical Abstract (1968), p. 410.

[4] Poland, *loc. cit.*, p. 54.

[5] Statistical Abstract (1965), p. 440.

Local Government Employment in Illinois

The governmental employment trends that have been observed for the United States as a whole are not substantially different for the State of Illinois. It is not possible to examine employment trends for Illinois over the same period as has been possible for the United States as a whole because of the unavailability of comparable data, but some trends can be indicated. First, the percentage of the civilian work force in the employ of government is less than the national average. In 1960 and 1964, 11.8 percent and 12.9 percent of the work force was employed in governmental service, whereas the national average was 15.4 percent and 16.4 percent for the respective years. Governmental employees in the State of Illinois numbered 474,000 in 1964.[6]

The Census Bureau found nearly 300,000 individuals employed in Illinois local government in 1967. The majority (53.4%) were employed in the function of education, which is outside the scope of this study. The remainder of the employees are distributed among roughly 13 functions, none of which dominates the others by force of sheer numbers. The function of police protection and correction is the largest of these remaining functions, with nearly 25,000 employees and over 8 percent of the total statewide local employment. Health and hospitals is the only other area that has over 5 percent of the total statewide local employment. Of the functions noted in Table 4, libraries and housing and urban renewal are the smallest with approximately 1 percent of the local

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[6] Ibid., p. 225.

Table 4

Local Government Employment in Illinois by Functions, 1967

Function	No. of Employees	% of State Employment
Total	296,302	100.0
Education	158,366	53.4
Highways	12,957	4.4
Health and Hospitals	17,318	5.8
Police and Correction	24,327	8.2
Fire Protection	8,712	2.9
Financial Administration	4,588	1.6
General Control	10,450	3.5
Water Supply	5,659	1.9
Other Utilities	13,215	4.5
Sewage and Sanitation	8,143	2.7
Parks and Recreation	7,238	2.4
Housing and Urban Renewal	2,797	0.9
Libraries	3,090	1.0
Public Welfare	7,938	2.7
Miscellaneous	11,504	4.1

Source: Compiled from worksheets of the U. S. Census Bureau's 1967 Census of Governments.

employment. Detailed discussion of each function noted in Table 4 will be found in appropriate functional sections in Chapters Five through Ten.

Except for the combined total of employees in Cook County, the remainder of the state has relatively few employees engaged in service to local governments. Local governments within Illinois counties have an average of 500 employees for each county, if Cook County is excluded, but local governments in county areas average nearly three times the 500 figure if the Cook County area is included. Governments in the Cook County area account for more than 55 percent of the total statewide local employment. As can be seen in Table 5, only in the functions of education, financial administration, and general control do the governments within Cook County account for less than 50 percent of the total statewide local employment. In the areas of housing and urban renewal, parks and recreation, sewage and sanitation, and other utilities, Cook County alone accounts for over three-quarters of the total local government employment in Illinois. The function of "other utilities" has nearly 95 percent of its employment in Cook County because of the large number of employees working for the Chicago Transit Authority, which has no counterpart downstate. When the local governments within Du Page, Kane, Lake, and Will counties are added to the total for Cook County, Region One becomes an entity that far surpasses the remaining 97 counties in terms of the quantity of public employment. This situation can readily be seen in Table 6.

The five counties in Region One also lead in absolute growth of employees. In the period 1962-1967, the governments of Cook County alone added nearly

Table 5

Local Government Employment in Cook County, by Functions, 1967

Function	No. of Employees	% of State Employment
Total for Cook County*	156,136	55.06
Education	70,281	44.37
Highways	7,110	54.87
Health and Hospitals	9,999	57.73
Police and Correction	17,874	73.47
Fire Protection	6,003	68.90
Financial Administration	2,090	45.55
General Control	4,726	45.22
Water Supply	3,683	65.08
Other Utilities	12,443	94.15
Sewage and Sanitation	6,245	76.69
Parks and Recreation	5,915	81.72
Housing and Urban Renewal	2,226	79.58
Libraries	2,061	66.69
Public Welfare	5,480	69.03

* Excluding a small number of miscellaneous and unassignable employees.

Source: Compiled from worksheets of the U. S. Census Bureau's 1967 Census of Governments.

Table 6

Local Government Employment in Regions, 1967*

Region	No. of Employees	% of Statewide Total
1	184,071	64.6
2	18,917	6.6
3	12,567	4.4
4	13,058	4.6
5	14,737	5.2
6	8,441	2.9
7	7,297	2.6
8	15,551	5.4
9	10,159	3.6

* Excluding a small number of miscellaneous and unassignable employees.

Source: Compiled from worksheets of the U. S. Census Bureau's 1967 Census of Governments.

23,000 new employees. This total represents over 40 percent of the employment over and above that of the year 1962 for the entire state. Region One accounted for over 30,000 new employees between 1962 and 1967, and represents over 60 percent of the local government employment growth from 1962-1967. Rounding out the top 10 counties in respect to absolute growth between 1962 and 1967 are Madison and St. Clair counties which are part of the St. Louis metropolitan area, Winnebago

Table 7

Ranking of Counties with the Greatest Numbers of Local Government Employment Growth, 1962-1967

Ranking	County	Absolute Growth 1962-1967
1	Cook	22,737
2	Du Page	3,405
3	Will	1,549
4	Lake	1,504
5	Kane	1,453
6	St. Clair	1,265
7	Madison	954
8	Vermilion	925
9	Winnebago	823
10	Champaign	821

Source: Compiled from worksheets of the 1967 Census of Governments and publications of the 1962 Census of Governments of the U. S. Census Bureau.

county which encompasses the Rockford metropolitan area, Champaign county where the main campus of the University of Illinois is located, and Vermilion County (Danville) which ranked a surprising eighth in terms of absolute growth (Table 7). In 1960, fifteen counties had a larger population, and most of these were expected to have greater local government employment growth than Vermilion.

Table 8

Ranking of the Top Ten Counties in Respect to Employee Percentage Growth, 1962-1967

Ranking	County	% Growth	Actual Increase in All Functions	Actual Increase in All Functions Except Education
1	Pulaski	69	107	19
2	Vermilion	63	925	62
3	Washington	61	133	106
4	Jackson	53	382	147
5	Fulton	52	514	312
6	Du Page	51	3,405	865
7	Will	49	1,549	206
8	Kendall	47	179	44
9	Clay	43	178	141
9	Williamson	43	357	203
10	Boone	38	168	48
10	Warren	38	201	190

Source: Compiled from worksheets of the 1967 Census of Governments and publications of the 1962 Census of Governments of the U. S. Census Bureau.

What is initially more inexplicable than the absolute growth in public employment from 1962 to 1967 for certain county areas, is the group of counties that have experienced the greatest percentage growth. Certainly, Pulaski County would not have been expected to rank first (Table 8) in respect to percentage growth; however, on closer inspection of its data, it is found that the overall employment in local government in Pulaski County would have increased by only 19 individuals if the function of education had been excluded from the totals. Part of the explanation is that the "Foundation Program" in education whereby the State of Illinois aids school districts such that a minimum sum of $520 is to be spent for each pupil. This program has allowed counties of lesser economic wealth to expand their educational system, and the lack of population does not affect the educational function as strongly as it does others. Only the high growth rate in the local governments of Du Page and Will Counties made it possible for these already large counties to rank in the top 10 in respect to percentage growth. Compare the total number of new positions (Table 8) in these counties with that of Pulaski County. Another part of the explanation for so many rural counties ranking in the top 10 in terms of percentage growth is that these counties have had such low numbers of employees in the past that additions of moderate numbers of personnel makes for the spectacular percentage growth noted.

Regional employment growth is in respect to percent growth fairly comparable across the state with no instances of a decline in local government employment as

Table 9

Growth of Local Government Employment by Region, 1962-1967

Region	Change in No. of Employees	% Change
1	30,648	19
2	3,606	23
3	2,055	19
4	2,851	27
5	2,615	20
6	1,328	18
7	1,152	18
8	2,774	20
9	1,906	22

Source: Compiled from worksheets of the 1967 Census of Governments and publications of the 1962 Census of Governments of the U. S. Census Bureau.

is the case with seven counties. The regions of lowest rate of growth are Six and Seven at 18 percent, while the largest is, in terms of percentage growth, that of Region Four with 27 percent growth, 1962 to 1967. The governments in the Chicago region ranked near the bottom in percentage growth, but far outstrip the other regions combined in terms of the total number of employees hired over and above those of 1962. Regions Seven and Nine, the only regions to have no urban counties within their boundaries, have experienced a degree of growth, but much of this growth has occurred in the area of education. In fact, many of the small non-urban counties of the state are holding their own only because of the employment growth in the function of education.

In this chapter, we have commented upon the relative growth of public manpower as compared to private manpower, some explanations put forward for public employment growth, the dominance of the Chicago region in the state manpower picture, and the growth of local governmental employment in recent years. With these data setting the boundaries of future discussions, the following chapter will begin the presentation of our findings in respect to PAT manpower in Illinois local government.

Chapter Four

GENERAL FINDINGS CONCERNING PAT MANPOWER IN ILLINOIS LOCAL GOVERNMENT

This chapter is intended as an introduction to the more detailed analysis of local governmental functions and occupations within the purview of this report. The functions considered are those which contain occupations that require at least two years or more of post-high school training. The functions analyzed in this report generally follow the categories devised by the U. S. Bureau of the Census. Nearly all the Census Bureau categories of governmental employment are represented in Illinois, although some of the functions are represented by very few numbers of employees. For instance, the functions of gas and electric supply are most often performed by the private sector rather than local government as is the case in some states.

The functions performed by Illinois local governments range from streets and highways administration to the operation of local housing districts. The following functions performed by Illinois local governments include occupations that require two years or more of post-high school training to qualify for a position: financial administration; general control and administration; streets and highways; public welfare administration; police protection; street cleaning, refuse and sewerage disposal; parks, recreation, and natural resources; health and hospitals; public utilities; libraries; and urban renewal and community development. Our research also indicates that the local governmental function of fire protection in Illinois

56/57

includes no more than just a few PAT positions and individuals who are required to have two years post-high school training or equivalent experience to qualify for employment. Even the fire chief is usually chosen from the ranks of fireman. Thus, the function of fire protection has been eliminated from further consideration in this report except for a brief analysis of overall employment.

Analysis in the following chapters will concentrate on occupations without in every case differentiating the educational level required because the respondents have indicated that most occupations require a certain minimum level of education. For instance, the occupation of public health physician requires a graduate degree, the position of civil engineer requires a Bachelor's degree, and engineering technicians and draftsmen require two years of post-high school training. The responses were consistent for most occupations, in noting that one or another level of education as a requirement for a position. However, in some cases occupations had varying requirements from government to government and region to region. For instance, the occupation of accountant was one in which only a slight majority fell into one educational category. Most accountants in the governments surveyed were required to have two to four years of post-high school training, but not a Bachelor's degree. When the analysis deals with an occupation such as accountant or any other where there are varying educational requirements, they will be noted in the analysis.

The respondents indicated that occupations come with a variety of titles. For instance, Cook County had seven different types of auditors. Thus, to make this analysis more meaningful, occupational titles have been combined where the occupations seem to be comparable. For instance, comptrollers, business managers, and treasurers are included under the occupational title of finance director. The occupation of personnel specialist combines occupational titles such as job description writer, staff development supervisor, labor relations employee, civil service examiner, recruiter, and other personnel occupations other than director of personnel. Thus, "occupation" is not always used in the most restrictive sense possible.

To summarize, in this chapter and for chapters five through ten these items will be considered:

I. The level of education required as a pre-condition for employing in occupation:

The levels of education considered are: (1) two to four years post-high-school training, (2) Bachelor's degree, and (3) a graduate degree.

II. Budgeted full-time positions:

The number of filled and unfilled budgeted full-time positions within local governments will be considered. Unfilled positions are used to assess pressing needs. Part-time positions are being eliminated for purposes of our analysis because the data received from local governments was not adequate except for impressionistic analysis.

III. Difficulty of recruitment:

Information has been collected concerning the difficulty of filling PAT manpower positions. Local officials were asked to note whether occupations are "not very difficult," "difficult," or "very difficult" to recruit. From these data an assessment with a fair degree of certainty regarding the difficulty of recruiting most of the occupations employed has been made. The difficulty of recruiting for individual governments and agencies is considered in the analysis rather than the total of employees in any occupation. That is, figures indicate the overall difficulty of Illinois local governments in recruiting any one occupation, rather than the number employed in the occupation.

IV. Recruitment area:

The analysis of recruitment area is handled in a similar manner to that of difficulty of recruitment. The alternatives for local officials are: "can recruit from Illinois," "can recruit from Illinois but difficult," and "cannot recruit from Illinois," as rankings of the degree of difficulty in recruiting. The researchers feel that information of this nature will be helpful to planners of educational curriculum because PAT personnel at the lower ends of our definition will be more easily recruited for Illinois local governments if they are educated within the State of Illinois.

V. In-service training:

When in-service training is seen as a realistic possibility, ways have been noted in which it may be implemented. Generally speaking, in-service training is realistic only for those occupations at the lower end of our definition of a PAT employee, such as building inspector or draftsman.

In some cases, current employees of local governments could be trained to upgrade skills and attempt to meet current manpower inadequacies.

Categories of Analysis for PAT Manpower Data

For purposes of analyzing the data from the mail questionnaires it was decided to group local governments in the State of Illinois in three analytical categories: (1) Chicago region (Cook, Du Page, Kane, Lake, and Will counties), other urban counties (see Figure 1), and the remaining 88 counties. The analysis is proceeding in such a manner because there would be less confidence in the data if they were broken down into a greater number of categories. For instance, responses from most of the downstate counties are not at a level that allows for either current supplies to be estimated or projections to be made with great confidence. The data have thus been combined to reflect arithmetic means on an area-wide basis. Thus, the nine urban counties outside of the Chicago area have been combined as a group while the remaining 88 counties within the state have also been combined as a separate group. If readers are interested in the occupations needed within any one county, they will have to interpolate the data to be discussed.

It can be confidently stated that the 88 non-urban counties in Illinois have collectively few PAT personnel at present, and the prospects for any large increase in these personnel for the years 1970 and 1975 is unlikely. As will be seen later, the 88 non-metropolitan counties have, in many cases, fewer of the PAT occupations in their county areas combined than have the nine urban counties outside the Chicago metropolitan region.

Population in counties and municipalities has been used to estimate the reliability of the responses from the three analytical categories noted above for the current survey. The effort is accomplished by estimating the level of operations of the respondents to those of the non-respondent governments. This has been done by comparing the population served by respondents and non-respondents (counties and municipalities) of an area. For instance, considering the Chicago metropolitan region, the response of the governments of Cook County and the City of Chicago and the other responding localities makes for an extremely favorable response ratio (6 to 1) in terms of population served by responding to non-responding governments. In respect to the remaining urban counties which have been grouped together for purposes of analysis, 27 of the counties and municipalities in this analytical region have returned responses while 26 have not. However, using our population-served ratio, the responding governments served more than twice the population of non-respondents (ratio of about 7 to 3). Finally, the counties and municipalities in the remaining 88 non-urban counties ranked poorly in terms of returns, i.e., 85 returned while 141 remained as non-respondents. However, when the ratio of populations served is computed, it is found that returns account for well over 50 percent of the population with the ratio being nearly 3 to 2.

Occupations Omitted from the Study

A special note of explanation is necessary concerning a number of occupations. These are the ones that are marginal to our definition of PAT, but are considered PAT manpower by a minority of localities. These occupations generally fall into the categories of general control, police protection, fire protection, and parks and recreation. For instance, a number of the responding localities listed clerical personnel, such as secretary or bookkeeper as filling PAT positions. While it is true that many secretaries and bookkeepers have two years of post-high school training, and in some cases, college degrees, such educational experience usually does not seem to be required. Many times, the localities will have available a supply of women in the work force who are interested in working for short periods of time and find clerical positions in accordance with their interests. In some cases, these women are not able to find other positions and thus, fall back to working at clerical positions that do not necessarily require any education other than a high school diploma.

An occupation that caused great difficulty in determining whether or not it should remain in the study was that of the police officer. Some of the responding municipalities (most often the smaller ones) indicated that two years of post-high school training was a prerequisite to hiring a police officer. However, questionnaires returned from the larger municipalities often noted that police officers were not required to have two years of post-high school training or more to qualify for positions within the functions of police protection. With the increasing emphasis on law and order, the occupation of police officer may, in fact, eventually be required to have two years of post-high school training as a prerequisite for a position with a larger municipality. But at present, this does not seem to be the case. In the last year, several junior colleges plus a major university--the University of Illinois at Chicago Circle--have implemented programs for training police officers. Unless these programs are expanded and others developed, the level of professionalism in police protection will not have advanced significantly by the year 1975. With the national emphasis on police protection, however, implementation of more programs seems likely, and as these programs produce officers of the law with more extensive educational training, municipalities will probably upgrade their educational requirements. But for the foreseeable future, the position of police officer will generally require no education beyond a high school diploma. Therefore, this study will not treat the position of police officer as a PAT position. Eliminating the position of policeman for purposes of this report certainly is not intended as a judgment of the importance of this occupation for the well-being of a locality.

As previously mentioned, the function of fire protection contained very few personnel that could be classified as PAT. Some of the larger municipalities and one or two of the local fire protection districts noted that the position of fire chief required two years of post-high school training or equivalent experience. However, we noted that most large city fire departments (we do not have data for the City of Chicago) do not have any educational requirements beyond a high school diploma. As in the case of police protection, the current absence of educational requirements should not preclude consideration of professionalizing the function of fire protection.

In another area, parks and recreation, we noted occupations such as golf superintendent, life guard, etc., that were listed as requiring certain levels of education. It seems as though these are more transient positions, and in most cases, the employee's education is an incidental. Thus, these are not considered PAT positions for the purposes of this report. In addition, a number of other occupations were listed as PAT by the respondents that we judged did not approach our definition. For instance, some governments listed maintenance men, auto mechanics, general foremen, printers, and others which are "skilled" occupations and require little more than six months to a year of post-high school training as normal requirements. As these occupations appeared, they were eliminated.

In yet other instances, we had problems deciding whether to include an occupation because of its rarity in local government. For instance, we had a situation in which a park district listed a "zoo specialist/zoo manager" as a current PAT position. It seems that this position would indeed require education as a prerequisite for employment. But because of its rarity in local government, it was, along with a few others, eliminated, or combined with other occupations, as the researchers' knowledge permitted. Occupations have been combined which have the same educational background as a prerequisite. Educational institutions do not usually produce fully trained specialists so this research procedure seems quite legitimate.

Elected positions posed the problem of whether education or experience was required. A decision was made to eliminate them from consideration. Thus, occupations such as clerk or recorder, supervisor, etc., are dropped from the analysis. An exception was made in the case of a few municipalities in respect to the occupation of treasurer because the municipalities had educational requirements. The rationale for other occupations not receiving detailed analysis in this report are more appropriately discussed in the sections concerned with particular functions.

PAT Occupations in the Greatest Number in Illinois Local Government

The returns from the Local Government Supply and Needs questionnaire indicates that the greatest number of PAT occupations are to be found in the functions of health and hospitals, general control, highways, parks and recreation, sewage and sanitation, and libraries. Local governmental functions such as police and corrections, fire protection, and water supply, contain very few PAT employees. The functions of financial administration, and housing and urban renewal, fall somewhere between the two groups previously mentioned. Total number of full-time employees in a function is not always indicative of the professionalism of that function. For instance, the functions of fire protection and public welfare have approximately the same number of employees throughout the state, but the function of fire protection is probably the least professionalized, while that of public welfare is the most highly professionalized function. Closely following the function of public welfare in respect to the greatest number of PAT occupations, is the function of streets and highways.

The occupations that are in greatest supply are attorney, civil engineer, engineering technician and draftsman, social worker, recreation specialist, registered nurse, sanitarian, and librarian. Other PAT occupations found in substantial numbers are: accountant, purchaser, personnel specialist, public works administrator, public health physician, laboratory technician, and building inspector. Naturally, one per municipality occupations such as city manager or personnel director are not to be found in the numbers of some of the other occupations. However, they are well represented in Illinois local governments. Some occupations such as data processing specialist and various types of planning personnel represent a growing trend in local government employment, but as of yet, are not significant in number as some of the previously mentioned occupations.

The social worker with a Bachelor's degree in the public welfare function is found most often, with a number of other occupations in this function ranked in the twenty most numerous PAT positions for Illinois local governments. These other PAT public welfare occupations such as case work supervisor, social case worker, and welfare rehabilitation worker, also rank in the top 20 occupations by reason of the large number employed by the Cook County Department of Public Aid. It is quite clear that the greatest number of PAT positions in local governments are to be found in the area of public welfare, in spite of the poorer returns from county governments, where the welfare function is chiefly located, as noted earlier.

Table 10

Ranking of the PAT Occupations found in Greatest Number in Illinois Local Government

1. Social Worker, B.S.
2. Civil Engineer
3. Recreation Specialist
4. Engineering Technician and Draftsman
5. Attorney
6. Casework Supervisor
7. Librarian
8. Registered Nurse
9. Sanitary Engineer
10. Accountant
11. Sanitarian
12. Social Caseworker
13. Welfare Rehabilitation Worker
14. Public Health Physician
15. Laboratory Technician
16. Purchaser
17. Building Inspector
18. Central Administrative Personnel
19. Finance Director
19. Public Works Administrator
19. Real Estate Appraiser

The general control function is well represented by occupations such as attorney and central administrative personnel. The recreation specialist represents the parks and recreation function as one of the 20 occupations in the greatest number. This occupation may rate the ranking it does on the basis of being the only line occupation in this function. It perhaps would rank lower if the occupation were split into sub-categories. Other positions in large number are librarian, registered nurse, sanitary engineer, and accountant. All of these occupations occur in numbers greater than one hundred, the minimal figure for occupations at the bottom of the ranking of Table 10.

Difficulty of Recruitment for PAT Occupations

The professional, administrative, and technical positions of Illinois local governments are difficult to recruit. When local officials were asked to rate the "Present Difficulty of Filling a Position" on a three-point scale of "Not Very Difficult," "Difficult," and "Very Difficult," most of the ratings centered around the category of difficult. Points were assigned to the categories (one for "Not Very Difficult," two for "Difficult," and three for "Very Difficult") for the purpose of computing a difficulty rating with ranges between one and three. Of the 25 occupations reported most difficult to recruit, those employed by at least ten responding local governments fall in a range from 1.71 to 2.18 when ranked as to difficulty of recruitment, as shown in Table 11. The researchers feel that such a range of values is impressive evidence of the difficulty of recruiting most PAT positions for Illinois local governments. In some cases where the occupation was not found in more than a handful of governments, its difficulty rating was above 2.18. For instance, respondents from only four Illinois local governments reported hiring statisticians, and together rated this position as exactly half way (2.50) between "Difficult" and "Very Difficult."

Of the more common PAT occupations hired by local governments, the planner and civil engineer are rated as the most difficult to recruit. Of the 25 highest ranking positions on the Difficulty-of-Recruitment Scale, nine have difficulty ratings of 2.00 or more while the remaining sixteen have ratings below 2.00.

Table II

Ranking of PAT Occupations by Difficulty of Recruitment for Illinois Local Governments*

	Occupation	Difficulty Score
1.	Planner	2.18
2.	Civil Engineer	2.16
3.	Recreation and Park Administrator	2.12
4.	Sanitarian	2.10
5.	Public Health Physician	2.10
6.	Engineering Technician and Draftsman	2.07
7.	Sanitary Executive	2.07
8.	Mechanical Engineer	2.00
9.	Personnel Administrator	1.95
10.	Public Welfare Administrator	1.94
11.	Sanitary Engineer	1.93
12.	Social Worker (B.S.)	1.90
13.	Laboratory Technician	1.88
14.	Chemist	1.87
15.	Data Processing Specialist	1.86
16.	Assistant City Manager	1.84
17.	Utilities Administrator	1.83
18.	Public Works Administrator	1.82
19.	Budget Analyst	1.80
20.	Recreation Specialist	1.78
21.	Planning Aide	1.75
22.	Registered Nurse	1.73
23.	X-ray Technician	1.73
24.	City Manager	1.72
25.	Systems Analyst	1.71

* Occupation for which at least ten local governments report employment.

Occupations that would intuitively seem difficult to recruit, such as that of public health physician, chemist, or data processing specialist, are fairly high on the list. Other positions, such as city manager and systems analyst, rank further down in the table than might be expected. It should be pointed out, however, that these positions do appear on the list of the 25 most difficult to recruit and that many others do not.

PAT Occupations for Which There Are the Most Pressing Needs

In discussing occupations in Illinois local governments, "pressing need" has been evaluated in terms of the number of unfilled budgeted positions. The assumption here is that localities recruit with the same intensity for all occupations and that such a ranking (Table 12) indicates the positions that are presently the most difficult to fill. The leading occupations in Table 12 also rank high on the listing (Table 10) of PAT occupations which occur in the greatest numbers. After the occupations of social worker (B.S.), engineering technician/draftsman, civil engineer, and librarian, in the ranking of Table 12, come a number of occupations that appear either low or not at all on the listing of occupations which occur in the greatest number. Such occupations as data processing specialist rank high in terms of the number of unfilled positions because it is a relatively new occupation in local government. Other occupations, such as public health physician and registered nurse, are positions of fairly long standing in local government but appear high in the rankings in Table 12 simply because demand still far exceeds supply. The occupation that ranks fifth in the total number of positions, that of attorney, does not have enough unfilled positions to merit its inclusion in the ranking of Table 12. This finding and others that were somewhat at variance from our initial expectations are discussed in greater detail in the functional chapters that follow.

Table 12

Ranking of PAT Occupations for which Illinois Local Governments Have the Most Pressing Needs*

1. Social Worker, B.S.
2. Engineering Technician/ Draftsman
3. Civil Engineer
4. Librarian
5. Public Health Physician
6. Registered Nurse
7. Data Processing Specialist
8. Systems Analyst
9. Caseworker Supervisor
10. Hospital Laboratory Technician
11. Social Worker, M.S.
12. Sanitary Technician
13. Utilities Administrator
14. Chemist
15. Sanitary Engineer
16. Welfare Rehabilitation Worker
17. Home Economist
18. Accountant
19. Personnel Administrator
20. Recreation Specialist

* Need in this table has been defined in terms of the numbers of unfilled budgeted positions. Recruitment difficulties within the larger governments in Cook County strongly affect the above rankings.

Recruitment Area for PAT Occupations

It is interesting to contrast the ratings of difficulty of filling positions to a quite similar scale involving the area from which employees can be recruited. As in the case of difficulty of recruitment, scores were given to the areas of recruitment specified by local officials. Specifically, one point was given to

"Can Recruit from Illinois," two points given to each notation of "Can Recruit from Illinois but Difficult," and three points to "Cannot Recruit from Illinois." In contrast to the Difficulty-of-Recruitment ranking, that for Area-of-Recruitment (Table 13) has far lower values (a range from 1.23 to 1.80) which, at the very least, indicates that local respondents clearly understood the difference between the two questions. However, it means more than this. Since none of the ratings in Table 13 fall above 2.00, we infer that the common PAT positions of local governments can be recruited from within the State of Illinois if salaries, fringe benefits, and other related factors are equal when a locality competes with other levels of government and the private sector.

The position of planner is rated as the most difficult to recruit from within the boundaries of Illinois, as well as first on the Difficulty-of-Recruitment scale. Next in difficulty of recruiting within Illinois are the occupations of assistant city manager and city manager. The city manager position was listed 24th in terms of difficulty to recruit, but ranked third on the Area-of-Recruitment scale. These facts indicate that Illinois municipalities seeking to recruit a city manager must often look beyond the boundaries of Illinois. Also falling much higher on the Area-of-Recruitment scale than on the Difficulty-of-Recruitment scale are the occupations of planning aide and data processing specialist.

Table 13

PAT Occupations Most Difficult to Recruit from Within Illinois*

Occupation	Difficulty Score
1. Planner	1.80
2. Assistant City Manager	1.79
3. City Manager	1.74
4. Public Health Physician	1.71
5. Sanitary Engineer	1.68
6. Planning Aide	1.56
7. Data Processing Specialist	1.52
8. Sanitary Executive	1.50
9. Civil Engineer	1.46
10. Purification Specialist	1.42
11. Public Welfare Administrator	1.41
12. Sanitarian	1.41
13. Community Organization Specialist	1.41
14. Architectural Draftsman	1.40
15. Recreation Specialist	1.39
16. Engineering Technician	1.38
17. Recreation Park Administrator	1.36
18. Utilities Administrator	1.36
19. Sanitary Engineer	1.33
20. Systems Analyst	1.33
21. Finance Director	1.29
22. Librarian (2-4 years)	1.29
23. Central Administrative Personnel	1.29
24. Building Inspector	1.23
25. Budget Analyst	1.23

* Occupations for which at least ten local governments report employment.

Chapter Five

THE FUNCTIONS OF FINANCIAL ADMINISTRATION AND GENERAL CONTROL

The growth of local government in Illinois increasingly requires certain financial administration and general control functions to be performed. And as governments grow, these functions are expanded and their personnel become more professionalized. Since the category of financial administration is smaller and more compact, it will be discussed first.

A. FINANCIAL ADMINISTRATION

There are six occupations that can be classified as PAT within the function of financial administration. They are: finance director, accountant, budget analyst, auditor, purchaser, and real estate appraisor. The first five are found in all areas of the state; however, the last is found only in the larger governments within Cook County. The position of finance director includes job titles such as business manager, comptroller, financial supervisor, and for a few municipalities, treasurer. Real estate appraisor is also a more general occupational category. It includes such diverse titles as building appraisor, land appraisor, property appraisor, and property inspector. Of these occupations, the accountants, purchasers, and finance directors are in greatest abundance throughout the state. Budget analysts and auditors are found less often.

The position of finance director is usually held by a person with a Bachelor's degree in accounting or some related speciality, and is most often found within municipal governments. The duties performed depend largely on the size of the municipality.

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In smaller municipalities, the finance director performs functions otherwise handled by accountants, budget analysts, and purchasers. In larger municipalities, these functions are performed by a staff of professional and technical employees who tend to specialize in more narrow areas. Nearly two-thirds of the finance directors are found in the five-county area surrounding and including the City of Chicago. Only 22 percent of the finance directors are found in the other nine urban counties, while the remaining 88 counties of the state have only 15 percent of the professional finance directors. Responding localities seem to have few positions of finance director presently unfilled. Responding governments also indicate that the finance director is less difficult to recruit than other financial administration personnel. We interpret these data as meaning that finance directors are many times promoted from within the ranks of current employees. The problem of recruiting a professional finance director is particularly difficult for smaller governments. A village manager for a Chicago suburban village of about 20,000 commented regarding the difficulty of obtaining such key personnel as a finance director, that the competition from private industry is significant because of its greater financial resources and its ability to provide more fringe benefits.

The position of accountant in Illinois local government is one that has varying educational requirements. Localities responding to our survey have noted that nearly 50 percent of the positions classified as accountant require two to four years post-high school training, while the remaining positions of accountant require a Bachelor's degree. In the greater number of cases, the position of accountant with a Bachelor's degree is found in the urban areas of the state, whereas the requirement

Table 14

Location of PAT Occupations of Financial Administration in Illinois Local Government

Occupation	Percentage in Chicago Area	Percentage in Other Urban Counties	Percentage in Non-Urban Counties
1. Finance Director	64	14	21
2. Accountant	81	9	9
3. Budget Analyst	80	20	--
4. Auditor	56	28	16
5. Purchaser	89	5	6
6. Real Estate Appraiser	100	--	--

Table 15

Difficulty of Recruitment for PAT Occupations in Financial Administration

Occupation	Difficulty Score
1. Budget Analyst	1.80
2. Accountant	1.70
3. Finance Director	1.59
4. Auditor	1.45
5. Purchaser	1.43
6. Real Estate Appraiser	1.00

Table 16

Projected Percentage Growth for Financial Administration PAT Occupations for 1975

Occupation	Projected Percentage Growth
1. Finance Director	--
2. Accountant	15
3. Budget Analyst	81
4. Auditor	13
5. Purchaser	7
6. Real Estate Appraiser	21

of only two to four years post-high school without the Bachelor's degree is found often in the less urban portions of the state. It should be noted, however, that this is not clearly a large government/small government phenomenom. For example, the government of Cook County reports that over half of its accountants are required to have two to four years post-high school training, but not a Bachelor's degree. Following an expected pattern, accountants in local governments are mainly found in the local governments of the five-county area of northeastern Illinois. In fact, it seems that special districts within the five-county area employ as many accountants as do all local governments outside the five county area. More specifically, over 80 percent of the accountants employed by local governments are employed in the five counties.

Although it does not rank among the 25 positions most difficult to recruit when all categories are considered, accountant is second in the category of financial administration in difficulty to recruit to the position of budget analyst. The only governments to report budgeted but unfilled positions for accountants were counties, municipalities, and special districts in the five-county area. In respect to area of recruitment, it seems possible for local governments to recruit accountants within the State of Illinois without a great degree of difficulty, as is the case with other PAT manpower in financial administration. Local government officials project a moderate increase in the number of accountants needed by the year 1975.

The position of budget analyst in Illinois local government is not widespread in location. Since it is necessary to have a large operations before efficient use of a budget analyst is obtained, such an individual usually works only for the larger governments in the state. In fact, three-quarters of the budget analysts are employed in the governments of the five-county area; only a handful work for the larger downstate municipalities. Budget analysts are usually required to have a Bachelor's degree, and in some cases, our research indicates that budget analysts are required to have graduate degrees. Illinois local governments find the position of budget analyst most difficult to recruit, in the financial administration category, and seem quite interested in recruiting significantly more of this occupation by the year 1975. More specifically, responding governments have noted that they are willing to recruit 80 percent more budget analysts for 1975 than are presently employed. It should be remembered, however, that budget analysts comprise so few local government employees, perhaps fewer than 30 for the entire state, that 80 percent is not a great increase in absolute numbers. In regard to area of recruitment, the local governments presently hiring budget analysts seem to have no problem hiring persons from within Illinois.

The position of auditor is found three times as often as the position of budget analyst in Illinois local government, but unlike the position of budget analyst, auditors are found more often in governments outside the five-county area, even though a majority of auditors are employed by local governments in the five-county area. As in the case of budget analyst, the auditor is usually found in a larger government, for the operation of a government has to be fairly complex in order to justify employing a full-time auditor. Of course, all governments have post-audits of their operations, but most of the post-auditing of these smaller units is done on a contractual basis with private C.P.A. firms.

As with budget analysts and auditors, the position of full-time purchaser is usually found in larger governments. The purchasing function is often performed by the finance director in small to medium sized cities. The data indicate that purchasers in Illinois local government are almost totally confined to the Chicago metropolitan area. Slightly under 90 percent of the purchasers are located in the northeastern five counties. The government of Cook County has budgeted 45 professional purchasers who are required to have at least a Bachelor's degree. This total accounts for at least one-third of all purchasers in the five-county area. The remaining full-time purchasers are employed in municipalities in the other nine urban counties along with a small number employed by the largest municipalities in non-metropolitan counties.

With the overwhelming number of purchasers located in the five-county area, the greatest number of unfilled positions occurs in this region, accounting for approximately two-thirds of the total of budgeted but unfilled positions. In terms of difficulty of recruiting, only the larger municipalities in the non-metropolitan counties seem to have much of a problem, and the urban counties outside the Chicago area note that purchasers are only moderately difficult to recruit. Responding municipalities and counties currently employing purchasers have noted that they do not expect much expansion of this occupation by 1975. In contrast to local governments within downstate urban counties, there are indications that the number of purchasers will need to be increased by one-third. In the local governments of the other 88 counties, there also seems a desire for some full-time purchasers by the year 1975. This response may indicate that many of the growing downstate municipalities and county governments plan to add professional purchasers in place of persons who are presently performing the function of purchasing on a part-time basis.

The occupation of real estate appraiser (inclusive of buildings and land) is confined to the northeastern five counties, and over 90 percent of these positions are maintained by Cook County.[1] The returns from our questionnaires have shown that no other local governments outside the Chicago area employ this specialized occupation. Other local governments certainly may employ real estate appraisers, but without requiring two to four years of post-high school training. Our study does not deal with such non-PAT personnel. Apparently, most real estate appraisers are easy for local governments to recruit. Such governments expect to hire 20 percent

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[1] Closely related to the occupation of real estate appraiser is that of township tax assessor.

Table 17

Local Government Employment in Financial Administration, by Region, 1967

Region	Number of Employees	% of Statewide Total
1	2659	57.95
2	329	7.17
3	156	3.40
4	228	4.96
5	278	6.05
6	239	5.20
7	118	2.57
8	387	8.43
9	194	4.22

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of Governments.

more appraisers by the year 1975, but recruiting additional appraisers would not seem to offer any difficulty in light of the present ease in recruiting these personnel. The occupation of tax assessor requires two years of post-high school training in some townships. However, in the majority of cases, the tax assessor's position does not require two years of post-high school training, and thus the position has been eliminated from consideration in this report.

Table 18

Growth of Local Government Employment in Financial Administration, by Region, 1962 - 1967

Region	Change in No. of Employees	% Change
1	-358	-11
2	-20	-5
3	-10	-6
4	9	4
5	-1	0
6	92	62
7	-33	-21
8	70	22
9	-30	-13

Source: Compiled from worksheets of the 1967 Census of Governments and publications of the 1962 Census of Governments of the U.S. Census Bureau.

Overall Employment in Financial Administration

Employment in the function of financial administration is distributed among local governments somewhat in proportion to the population distribution within Illinois. A clear-cut majority of the employees in this function are hired by the local governments in the Chicago region (Table 17), but every region has substantial numbers. Even the smallest of regions in terms of population,[2] Region Seven in southeastern Illinois, has 118 full-time equivalent employees in financial administration. Employment in financial administration has fallen off somewhat since 1962. Six of the nine regions in the state report that there are less employees in financial administration in 1967 than there were five years earlier (Table 18). We had expected this function to grow within the period considered, but there are several possible explanations for the opposite case. The first is that the function of financial administration was separated by the U.S. Bureau of the Census, in its enumeration, from that of general control in 1962, and it may be that local officials tended to keep some of the occupations in general control that were later determined to be within the purview of financial administration. A second and more reasonable explanation is that employment in financial administration has been reduced by reason of the introduction of modern data processing in the field of financial administration. Once an efficient data processing operation is instituted, the duty of processing a payroll for a large government can be handled with many less personnel than was the case prior to the installment of data processing equipment. There is a strong technological basis for asserting that the number of employees in financial administration may be reduced further if the municipalities have the will to do so, and it is probable that only the more skilled occupations in this area will tend to grow in the future.

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[2] See Figure 1 for the boundaries of the nine regions.

B. GENERAL CONTROL AND ADMINISTRATION

Traditionally, the general control positions of local government have been thought of as the manager or executive director, personnel administrator, other central administrators, public relation employees, and attorneys. Within the last decade, however, new general control occupations have been employed in local government such as planner and data processing specialist.

One of the most important general control occupations is that of city manager, who is the top administrator of a municipality. There is presently no comparable position for counties. Questionnaire returns indicate that a slight majority of the city managers are required to have a Bachelor's degree, and the remainder required also to have a graduate degree of some kind. They receive their educational training in a number of fields with political science and public administration being noted most often by a sample of Pennsylvannia managers.[3]

Of the 44 council-manager governments responding to our questionnaire, only three were lacking a city manager at the time the questionnaire was completed. However, the researchers expect that the percentage of city manager positions presently unfilled is higher than results of this survey would indicate. The manager is usually responsible for the completion of such questionnaire. Lack of a manager at the time the questionnaire was received may have resulted in a lesser rate of response. Municipalities report that they have had a moderately difficult time recruiting city managers, and have recruited from outside the State of Illinois in a large number of cases. Concerning additional numbers of city managers needed, there does not appear to be a large number of governments that will convert to the city manager form by the year 1975, but a number of managers will be needed to replace those who move on to other municipalities. Studies of the International City Managers' Association indicate that the position of city manager is one in which there is a relatively high turn-over rate.[4]

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[3] S.S. Dubin, E. Alderman and H.L. Marlow, Educational Needs of Managers and Supervisers in Cities, Boroughs, and Townships in Pennsylvania (University Park, Pa.: The Pennsylvania State University Continuing Education, 1968), 15.

A growing position in Illinois municipal government is that of assistant city manager. Presently, one-third of the city manager municipalities also have an assistant city manager; most of these positions (70%) are located in the Chicago metropolitan area. Several downstate municipalities have indicated that they have budgeted full-time positions for an assistant city manager, but have been unable to fill this position. Responding officials have also noted that the position of assistant city manager is more difficult to recruit, and the area of recruitment stretches further beyond the immediate area, then in the case of the city manager. Our findings are in agreement with the findings of a study using a nationwide sample. Andrew W. Boesel found that an

> existing shortage of administrative assistants has a far-reaching long-term impact. It is from this current generation of administrative assistants that the next group of city managers and other chief administrative officials will have to come. If these administrative assistants

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[4] Boesel, Andrew W., "APT Personnel - Manpower Shortages and Recruitment Policies," The Municipal Yearbook: 1968 (Washington, D.C.: The International City Managers' Association, 1968), 214.

> are not available today, in the years to come cities will experience greater difficulty in hiring a chief administrative official who is well trained and has had extensive experience in local government.[5]

Fourteen municipalities who do not employ an assistant city manager presently have indicated that they hope to do so by the year 1975. Most of these municipalities are suburbs in the Chicago area.

Another of the important positions in local governments is that of the central administrative personnel who aid top elected and appointed officials. The position titles of these personnel include administrative assistant, general superintendent, district manager, executive director, and others. Often these are the administrative personnel closest to the top elected officials. Such positions may not necessarily require certain educational levels, and they have been ignored to some degree by respondents in this study. As was expected, most of the central administrative personnel are located in the northeastern five-county area, especially within the governments of Cook County and the City of Chicago. Respondents have noted that these personnel are relatively easy to recruit, that there do not appear to be many unfilled positions, and that recruitment can without too much difficulty be accomplished from within the State of Illinois. We believe, however, that the data compiled in regard to these positions is not entirely reliable. This statement is made in the belief that these key administrative personnel were overlooked because often there are no formal educational requirements for their positions. Educational requirements notwithstanding, central administrative positions are vital in any government, and the quality of service within government is largely dependent upon the performance of these personnel. For the positions of central administrative personnel the questionnaire construction may have made it difficult for respondents to ascertain the nature of what we wanted them to report. Thus, we present the data but with the qualifications stated.

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[5] Ibid., 212.

An increasingly difficult occupation to recruit and hold has been that of planner. Educational requirements for planners are similar to those for city managers; that is, about half of the positions of planner require a Bachelor's degree, while the remainder require some graduate training and/or degrees. Approximately 60 percent of the professional planners appear to be located in the five-county area, for which Chicago is the hub, and most are found in county and municipal governments.

The difficulty of recruiting planners can be placed in perspective when it is observed that only statisticians are more difficult for local government to recruit for the general control function. It should be remembered, however, that statisticians in comparison to planners are very few in number and are recruited only for the largest of local units. The areas seeming to experience the greatest difficulty in recruitment of professional planners are the local governments in the nine downstate urban counties. Recruitment difficulty in the Chicago metropolitan area and the rural counties of the State is reported to be about the same. Of all the positions in general control, the local governments in the State most often go beyond the boundaries of Illinois to recruit their planners. Only the positions of city manager and assistant city manager seem to be recruited from outside the

Table 19

Location of PAT Occupations in General Control and Administration in Illinois Local Government

	Occupation	Percentage in Chicago Area	Percentage in Other Urban Counties	Percentage in Non-Urban Counties
1.	City Manager	61	16	23
2.	Assistant City Manager	70	15	15
3.	Central Administrative Personnel	87	5	8
4.	Statistician	100	--	--
5.	Planner	61	15	24
6.	Planning Aide	24	13	63
7.	Personnel Administrator	75	7.5	17.5
8.	Architectural Draftsman	95	5	--
9.	Systems Analyst	100	--	--
10.	Attorney	85	9	6
11.	Public Relation Employee	69	15	15
12.	Data Processing Specialist	87	3.9	9.2
13.	Personnel Specialist	98	--	2

Table 20

Difficulty of Recruitment for PAT Occupations in General Control and Administration

	Occupation	Difficulty Score
1.	Statistician	2.50
2.	Planner	2.18
3.	Architectural Draftsman	2.17
4.	Personnel Administrator	1.95
5.	Data Processing Specialist	1.86
6.	Assistant City Manager	1.84
7.	Planning Aide	1.75
8.	City Manager	1.72
9.	Systems Analyst	1.71
10.	Personnel Specialist	1.56
11.	Public Relations Employee	1.43
12.	Central Administrative Personnel	1.42
13.	Attorney	1.36

Table 21

Projected Percentage Growth for General Control and Administration PAT Occupations for 1975

Occupation	Projected % of Growth
1. City Manager	5
2. Assistant City Manager	82
3. Central Administrative Personnel	13
4. Statistician	25
5. Planner	38
6. Planning Aide	53
7. Personnel Administrator	14
8. Architectural Draftsman	57
9. Systems Analyst	51
10. Attorney	26
11. Public Relations Employee	22
12. Data Processing Specialist	72
13. Personnel Specialist	100

boundaries of Illinois as often as is the planner. Of the local governments making projections, there was reported an expectation that 38 percent more planners will be employed in Illinois in 1975. This increase was especially noticeable in the Chicago metropolitan area where it amounted to 44 percent.

Almost as scarce a personnel commodity as the professional planner is the planning aide. This individual usually is required to have two years of post-high school training. Respondents indicate that there are presently as many planning aides employed in local government as there are planners. However, aides and planners are not necessarily located in the same areas of the state. Respondents in the municipalities of downstate urban counties note that they have greater numbers of planning aides per government (usually a municipality) than do the governments in the five-county Chicago area. The planning aide is moderately difficult ro recruit and can usually be recruited from within the State of Illinois. Local officials in the state plan to have in their employ by 1975 approximately 50 percent more planning aides than are presently employed. This occupation was one for which local officials consistently answered that adequate personnel could be developed through in-service training.

The personnel function has been a sub-function of long standing under general control for large organizations. Two occupations under the heading of personnel are considered in the present study. They are personnel administrator and personnel specialist. The personnel function has been split in this manner for analytical purposes because the job descriptions in personnel are myriad. For instance, a personnel specialist could be a job description writer, staff development supervisor, office manager, labor relations employee, civil service examiner, recruiter, and so on. Thus, for the convenience of having the number of entries in a category amenable to meaningful analysis, the job titles mentioned above have all been classified under the heading personnel specialist. One occupation in the personnel category has been kept separate, that of head personnel administrator. The reasoning behind this separation is a desire to develop information concerning all top administrative positions in local governments.

Head personnel administrators are usually required to have a Bachelor's degree, but a few municipalities require only two years post-high school training. In the case of some of the larger governments in Cook County, the personnel administrator or director is required to have a graduate degree. Well over three-quarters of the Illinois local governments that hire full-time personnel administrators are located in the northeastern five-county area, while the other urban counties employ approximately eight percent and the remaining 88 counties employing only seven percent of these personnel. Respondents have noted that approximately 20 percent of the full-time positions of head personnel administrator are presently vacant, with nearly all of these vacancies existing in the five-county area. As a further indication of the difficulty in recruiting top personnel administrators, they rank higher on the difficulty of recruitment scale than city managers, assistant city managers, and other key municipal employees. Local governments have indicated that they will be hiring approximately 14 percent more head personnel administrators in 1975. From the returns from our questionnaire, it seems as though not many more than 10 cities will hire full-time personnel administrators by 1975. The researchers feel that this projection by local officials may be a conservative evaluation, for many of the municipalities in high growth areas may not anticipate the degree of growth which they may experience by 1975.

Supporting personnel specialists are found in greater number than are administrators of personnel. Currently, supporting personnel specialists number 50 percent more than do head personnel administrators for the entire state. But as local governments grow, the supporting personnel specialist will tend to increase at an even greater rate. These supplementary personnel specialists now are found almost exclusively (98%) in the five-county area, and most are working for Cook County and the City of Chicago. Respondents in these governments report that there is some but not a great deal of difficulty in recruiting these personnel, and that most are hired from the immediate area. Considering needs for 1975, local officials in the five-county area report that they then expect to hire double the number of supplementary personnel specialists, as are currently employed. As seen by local officials, this occupation will be one of those greatest in demand for the future.

In the original construction of the questionnaire for this study, an attempt was made to distinguish between a computer programmer and a data processing specialist with wider experience in data processing. In the questionnaire in the category of general control, positions were noted as "data processing specialist" and "computer programmer." The researchers reasoned that the data processing specialist would be that person who is the supervisor over computer operations, while a programmer would be the person concerned mainly with handling data manipulations. The data processing specialist thus was conceived of as the person likely to be required to have a Bachelor's degree, or even a graduate degree, by localities with especially sophisticated operations such as the City of Chicago or agencies of Cook County. However, responding local officials seemed to tend to confuse the two occupations, and the result is that the educational level for computer programmers and data processing specialists is noted as being about the same, i.e., approximately half of either occupation are required to have two to four years post-high school training while the remainder are often times required to have a Bachelor's degree. Thus, for purposes of analysis in this report, the researchers are combining data processing specialists with computer programmer under the classification of data processing specialist.

Over 85 percent of all data specialists are employed in the local governments of the northeastern five-county area, indicating that these are governments large enough to make efficient use of data processing equipment and willing to computerize their records. The remaining data specialists are employed in the larger downstate cities. Local governmental respondents have noted that data specialist is a difficult position to fill, but less so than positions such as personnel administrator or planner. The position of data specialist is moderately difficult to recruit, and it appears from the responses that recruiting of such specialists must of necessity go beyond state boundaries more frequently than for any other occupation except the positions of city manager and planner. This fact may indicate that the State of Illinois should seriously consider the expansion of existing programs or implementation of new programs in data processing. Additional support for such expansion of programs in data processing might be that localities expect to hire about 75 percent more data specialists by the year 1975, than currently. This is a significant indication that local governments in Illinois are seriously considering automatic data processing as a means of more efficient general control operations. But available manpower in this area is relatively scarce, and local governments may not be able to compete for it with their present level of resources. This assessment is further supported by the present situation in which approximately one-quarter of all budgeted positions in the area of data processing are vacant.

Systems analyst is included in the discussion because there are a few such positions existing in the larger governments. Returns from our questionnaire have indicated that Chicago, Cook County, and large special districts in the Cook County area presently list about 45 of these positions with half this number of budgeted positions being unfilled. This occupation, which may go under the title of methods and procedures advisor, is usually one in which a Bachelor's degree is required, although some governments have noted that persons in this specialty are required to have graduate training. Somewhat surprisingly, these governments report that the position of systems analyst is difficult, but not particularly difficult, to recruit and that the recruitment area is generally within the boundaries of Illinois. In addition, it is reported that 51 percent more systems analysts are expected to be employed by 1975.

The responses of local officials brings to light some interesting data with respect to the occupation of attorney. Of all the occupations in general control, this one is employed by local governments in the greatest number. As expected, a great majority of full-time attorneys employed by Illinois local governments are found in the

Chicago metropolitan area, with the largest number of unfilled positions also occurring in this area. It was also expected that the position of attorney would be more difficult to recruit and to retain than other PAT personnel; however, responding officials noted only about two percent of the positions as being presently vacant. This occurrence is far lower than any of the other occupations that require as much training as that of attorney does.

Local officials consider the position of attorney the easiest to recruit of any of the common general control positions. The position ranks slightly below that of the central administrative personnel referred to earlier. Salary, prestige of the position, and other factors may make the position of attorney in local government more desirable than the general citizen may first suspect. The 1.04 rating on the Area-of-Recruitment scale indicates that nearly every local official responding to our questionnaire checked the "can recruit from Illinois" box while only a few noted "can recruit from Illinois, but difficult".

Local officials estimate that by 1975 approximately one-quarter more attorneys will be hired than are presently working in their governments. It should be noted that this is a significant number considering that attorneys compose a sizeable percentage of the PAT employees in local governments. On a rough basis this would indicate that local governments may hire and employ at least an additional 150 attorneys in various capacities by 1975. Yet, in light of present ease of recruitment, it may well be interpreted that localities in Illinois may not experience a great deal of difficulty in recruiting the additional attorneys needed. However, with the expansion of the legal profession into such areas as legal services for the poor, the competition local governments will have to meet in the future may be far more intense than at present.

Public relations employees are required to have a Bachelor's degree while in a few cases persons employed in this position have only two to four years post-high school training. Of the 15 positions reported by responding local governments, only two were noted as not having been filled. The difficulty of recruiting seems to be little more than that of recruiting an attorney, although it is reported that this position rates higher on the difficulty to recruit from the immediate territorial area. Responding governments have noted that they expect to hire a few more public relations employees by the year 1975, but because of the low number of localities commenting on this position, there is some reluctance on our part to report any of the projections on this occupation.

Larger governments in the Cook County area report that there are presently 21 budgeted positions of statistician which require in most cases a Bachelor's degree. Of these positions, approximately one-quarter are presently unfilled. The responding local officials have also categorized the position of statistician as the most difficult general control position to recruit, and, incidentally, it is one of the most difficult positions to recruit in local government across the board. Local officials responding have estimated that there will be approximately 25 percent more statisticians employed in 1975 than at present.

The last position to be discussed in the category of general control is that of architectural draftsman. Though we are not entirely confident that this position belongs in the area of general control, it seems more appropriate for this category than for any aother. This position, which requires two to four years of post-high school training, but not a degree, is found most often in the five-county Chicago area. There does not seem to be a particular problem in filling current budgeted positions because few are presently vacant, but local officials rate the architectural draftsman as one of the more difficult positions to recruit. As in the case of statisticians, this situation is not particularly critical because of the few numbers of architectural draftsmen hired in Illinois local governments. The problem may be more severe in the future, however, since local officials predict that in 1975 they will hire 50 percent more draftsmen than in 1968.

Overall Employment in General Control

Employees in general control are distributed on about the same basis as are those in financial administration. A majority of the total in both functions are employed in Region One, although slightly more employees in the former as in the latter are found in the downstate regions. As can be seen in Table 23, the function of general control is experiencing considerable growth. From 1962 to 1967, every region of the state has hired more than 100 new employees in this function with the Chicago region leading, having added over 800. In respect to percentage growth, all regions but Cook County have employed from one-quarter to three-quarters more employees during the five-year period. Regions Five, Seven, Eight, and Nine report that they have hired 60 percent more.

If total employment in general control is combined with that of financial administration, as the U.S. Bureau of the Census did before 1962, it could be

Table 22

Local Government Employment in General Control, by Region, 1967

Region	No. of Employees	% of Statewide Total
1	5835	55.83
2	824	7.88
3	517	4.94
4	455	4.35
5	699	6.68
6	395	3.77
7	333	3.18
8	823	7.87
9	569	5.44

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of Governments.

anticipated that 18,499 individuals will be employed in these areas by 1975.[6] It is not unreasonable to expect that the greatest expansion in these areas will occur with respect to the employment of PAT manpower.

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[6] See regression data table and explanation in Appendix B.

Table 23

Growth of Local Government Employment in General Control, by Region, 1962 - 1967

Region	Change in number of Employees	% Change
1	802	15
2	258	45
3	111	27
4	121	36
5	269	62
6	122	44
7	127	61
8	320	63
9	231	68

Source: Compiled from worksheets of the 1967 Census of Governments and publications of the 1962 Census of Governments of the U.S. Census Bureau.

Chapter Six

THE FUNCTIONS OF LAW ENFORCEMENT AND FIRE PROTECTION

A. Police Protection and Corrections

In the late 1960's, the function of police protection and corrections is one of high visibility to the general public. In accordance with this situation, the President's Commission on Law Enforcement and Administration of Justice put forth a report in 1967. As its national strategy, the Commission recommended that: "In every State and every city, an agency of one or more officials, should be specifically responsible for planning improvements in their [law enforcement and administration of justice] implementation."[1] If recommendations such as this one are put into effect, certainly a need for more professionally trained individuals could mushroom. ~~However~~, presidential commission recommendations have not always been heeded. With the possible effect of such recommendations, and passage of the Omnibus Crime Control and Safe Streets Act in 1968 with its far reaching law enforcement grants under Title I, any attempt at assessment of employment needs in this area is a tenuous one. Since our questionnaires were mailed, more money has been allocated to this function for all levels of government and no one knows the zenith which police protection resources might reach. In an April 23, 1969

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[1] Commission on Law Enforcement and Administration of Justice, Report of the Commission, The Challenge of Crime in a Free Society (Washington, D.C.: U. S. Government Printing Office, 1967), p. 280.

Table 24

Location of PAT Occupations of Police Protection and Corrections in Illinois Local Governments

Function	Percentage in Chicago Area	Percentage in Other Urban Counties	Percentage in Non-Urban Counties
1. Public Safety Director	60	15	25
2. Laboratory Technician	97	3	--

Table 25

Difficulty of Recruitment for Police Protection PAT Occupations

1. Public Safety Director	1.62
2. Laboratory Technician	1.50

message to Congress by President Nixon, he expressed hope that crime control would be an area in which the appropriation would be increased over the 1968 Johnson Administration fiscal figures by $25 million dollars.

As previously mentioned, the researchers decided to omit the occupation of policeman from consideration in this study. The rationale for this decision is that, even in the largest city of Illinois, there are no requirements for policemen to have two years of post-high school training. Thus, it is highly unlikely that many other municipalities would have such a requirement. In addition, the position of coroner was reported to have educational requirements in some cases, but will not be dealt with because it is elective and thus outside the scope of this study. The occupations to be considered under the category of police protection and corrections then are those of public safety director, laboratory technician, and probation officer.

The position of public safety director includes the police chief in many localities because both functions are performed by the same individual. It is only in a minority of cases that a municipality has both a public safety director and a police chief in its employ. The position of public safety director is rated by local officials as only moderately difficult to recruit. The remaining PAT positions in this function are laboratory technician and probation officer. Chicago reports 28 positions for laboratory technicians as currently filled. This position requires two years post-high school training, is only moderately difficult to recruit, and is found almost exclusively, in Illinois local government, in the City of Chicago. The position is reported easy to recruit from the immediate area, and the prospect of future additional employees in this speciality is predicted to be low.

The position of probation officer in Cook County requires a Bachelor's degree. This requirement is not usually the case for other county governments. Respondents have supplied us with little information concerning difficulty of recruitment, area of recruitment, and future needs for probation officers. As the function of police protection and corrections tends to become professionalized, there will surely be a demand for more highly trained and experienced probation officers. The demand for professional probation officers would probably strongly correlate with society's emphasis toward rehabilitation of the convicted criminal. The 1965 National Survey of Corrections made of every state plus a sample of 250 counties projected for 1975 that the number of adults on probation would be about two and one-half times more than the population growth within correction institutions. The comment is then offered that "more manpower is needed for probation services than is now available."[2]

Overall Employment in Police Protection and Corrections

Of the areas focused upon in this study, police protection and corrections has by far the most employees. There are more than 8,000 more employees in this function than there are in the function of health and hospitals. By 1975 the total number employed in the police and corrections function should reach 29,539.[3] Most of the employees in this function are in the area of police protection, with corrections accounting for only a small part of the total. With the recent emphasis in the federal budget on police and corrections, it is likely that the local police protection function will remain, apart from that of education, the largest employer in local governments.

Proportionately large numbers of local government police and corrections employees are found in the metropolitan areas of the state (Table 26). The five counties in Region One account for 80 percent of the total employees in this function. On the other hand, Region Nine, which includes the 20 southernmost counties of the state, accounts for only 1.5 percent and a total of 358 local government

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[2] Commission on Law Enforcement and Administration of Justice, Task Force Report, Corrections (Washington, D.C.: U.S. Government Printing Office, 1967), pp. 27-29.

[3] See regression data table and explanation in Appendix B.

Table 26

Local Government Employment in Police and Corrections, by Region, 1967

Region	Number of Employees	% of Statewide Total
1	19,505	80.17
2	1,021	4.19
3	664	2.72
4	615	2.52
5	708	2.91
6	425	1.74
7	243	.99
8	788	3.23
9	358	1.47

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of Governments.

employees in this function. Region Seven, which also does not have any metropolitan county within its boundaries, accounts for less than 1 percent of the total in this function. These figures should not be taken as indicating that the more rural areas of the state do not have adequate police protection, for this is not necessarily the case. Police protection in the more rural areas of the state is supplemented by troopers from the Illinois State Police.

Table 27

Growth of Local Government Employment in Police Protection and Corrections, by Region 1962-1967

Region	Change in Number of Employees	% Change
1	3,058	18
2	332	48
3	153	29
4	154	33
5	235	49
6	107	33
7	64	35
8	227	40
9	55	18

Source: Compiled from worksheets of the 1967 Census of Governments and publications of the 1962 Census of Governments of the U.S. Census Bureau.

In contrast to the highway function, police protection and corrections is experiencing substantial growth throughout the state. Only in Regions One and Nine is growth substantially less than 30 percent for the period 1962 to 1967 (Table 27). Further, the percentage change for the Chicago region is as low as it is because of the already large base figure for 1962. Local governments in the 20 southernmost counties (Region Nine) added only 55 employees between 1962 and 1967, but the figure is impressive when one considers that half of these counties have been losing population. In terms of absolute numbers, local governments in the north eastern five-county area have added nearly three times the number of employees in this function as have the other eight regions combined. Continued growth in this function should lead to a greater degree of professionalism than has been the case in past years.

B. Local Government Employment in Fire Protection

As mentioned in Chapter Four, discussion of the function of fire protection will focus only on overall employment because we have not found education or training requirements that would classify employees as PAT.[4] Like police protection, the local government fire protection function extends over the entire area of the state. The overwhelming majority of fire protection employees are found in the larger municipal governments in the state. Full time employees tend to be concentrated in urban areas. Most of the rural areas in Illinois are served by approximately 700 fire protection districts. Together these districts employ few individuals on a paid basis and rely almost exclusively on volunteers to perform the line fire-fighting function.[5]

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[4] In responding to the manpower questionnaire, a fire chief summarized current training and future needs for trained personnel in fire protection by saying: "Presently, in-service training is the only training readily available for fire departmental personnel, and the quantity and quality varies greatly from area to area. In light of present day requirements this level of training is grossly inadequate. Above the level of firefighter this problem becomes acute. Two years of post-high school training would be highly desirable, but is not readily available. What is needed in this level of local government are higher and uniform job requiremen standards, and the educational facilities to prepare personnel for these standards."

[5] "Fire Protection districts are relatively easy to form. Fifty voters, or a majority of the voters in the proposed district if there are less than 100 voters, may petition the county judge to call an election. Approval requires a majority vote within each incorporated place and in the unincorporated area." See Glenn W. Fisher and Robert P. Fairbanks, Illinois Municipal Finance (Urbana: University of Illinois Press, 1968), 22.

Table 28

Local Government Employment in Fire Protection, by Region, 1967

Region	Number of Employees	% of Statewide Total
1	6,501	74.62
2	436	5.00
3	298	3.42
4	316	3.62
5	441	5.06
6	183	2.10
7	91	1.04
8	314	3.60
9	132	1.51

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of Governments.

75 percent of the local government employees in fire protection are employed in the five counties of the Chicago region. The 6500 employees in this region completely dwarf any of the totals for other regions. In respect to rate of change between 1962 and 1967, the largest growth in numbers has been in the Chicago region; however, the percentage growth has been greater in six of the eight remaining regions. The largest rate of growth has occurred in Regions Five and Nine, which contain non-urban counties with the exception of Rock Island County in Region Five.

Table 29

Growth of Local Government Employment in Fire Protection, by Region, 1962-1967

Region	Change in Number of Employees	% Change
1	448	7
2	48	12
3	41	15
4	271	9
5	91	26
6	-1	0
7	12	15
8	-21	-6
9	36	37

Source: Compiled from the worksheets of the 1967 Census of Governments and the 1962 Census of Governments of the U.S. Census Bureau.

Growth has been especially large in these counties because of the small base for 1962. The only region to decline in the number of full-time fire personnel was Eight. This decrease was mainly due to reductions in this function by local governments in St. Clair County. Overall employment should be approximately 9,792 by the year 1975,[6] but it is unlikely that many will be PAT employees.

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[6] See regression data and tables in Appendix B.

Chapter Seven

THE FUNCTIONS OF PARKS AND RECREATION AND COMMUNITY DEVELOPMENT

A. Parks, Recreation, and Natural Recources

The parks, recreation, and natural resources functions of local government are performed almost exclusively by special districts in the State of Illinois, with a small number of municipalities also offering some recreation services. Within this area, the parks and recreation function is by far the most extensive and abundant for local government. Most of the natural resources functions are performed by the federal and state governments. The difference in the level of operations of these sub-areas can be observed when it is noted that only nine forest preserve districts were mailed questionnaires, whereas 108 park districts were so included.

With the well-recognized need to provide opportunities in the Twentieth Century for persons to make good use of leisure time, the parks and recreation function has been increasingly considered to be more than just an area in which the personnel need only be physically present for the distribution of equipment and for supervision. In addition, the report of the Kerner Commission has urged local recreation districts to reassess their programs for underprivileged citizens. Many recreation personnel have realized that it takes more effort and skill to involve the disadvantaged in recreation programs, and are attempting to respond to this situation to a limited degree. Thus, the recreation function has become increasingly staffed with persons having Bachelor's degrees and in many cases, even Master's degrees and Ph.D.'s, continuing a trend.

Table 30

Location of PAT Occupations in Parks, Recreation, and Natural Resources in Illinois Local Government

Occupation	Percentage in Chicago Area	Percentage in Other Urban Counties	Percentage in Non-Urban Counties
1. Recreation/Park Administrator	62	15	23
2. Recreation Specialist	95	2	3
3. Naturalist	N.D.	N.D.	N.D.
4. Landscape Engineer	86	--	14

Table 31

Difficulty of Recruitment for Parks, Recreation, and Natural Resources PAT Occupations

Occupation	Difficulty Score
1. Landscape Engineer	2.17
2. Recreation/Park Administrator	2.12
3. Naturalist	2.00
4. Recreation Specialist	1.78

Table 32

Projected Growth for Parks, Recreation, and Natural Resources PAT Occupations in 1975

Occupation	Projected % Growth
1. Recreation/Park Administrator	25
2. Recreation Specialist	28
3. Naturalist	100
4. Landscape Engineer	N.D.

The duties of the park and recreation administrator vary with the size of the local park and recreation operation. In the larger park districts, the park administrator is responsible for the maintenance and general operation of the physical plant, and recreation per se is the responsibility of a specialist in recreation. In the smaller districts, the chief administrator performs many functions including line recreation functions besides various administrative duties. Most of the full-time park and recreation administrators are located in the northeastern five-county area (62%), 23 percent are found in the other nine urban counties, and the remaining fifteen percent are found in the 88 non-urban counties of the state. These administrators are usually required to have at least a Bachelor's degree and many times a graduate degree in the larger districts. This position is one of the more difficult to recruit, but it is possible to recruit the position from the State of Illinois. While the data on projections is somewhat impressionistic, there is an indication that many of the park districts not presently employing full-time administrators may do so by 1975.

The recreation specialist in Illinois local government ranks high in sheer numbers. Respondents have noted that there are nearly 600 employees in this category, thus at least another 50 probably occur in the non-responding governments. In most cases, recreation specialists are required to have a Bachelor's degree. 95 percent of these employees are found in the five-county area. The percentage is high for this area because the Chicago Park District has 500 positions that require a Bachelor's degree. It accounts for approximately 85 percent of all the professional employees in the recreation function in Illinois local government. Respondents have noted that the recreation specialist is moderately difficult to recruit and that it is not particularly difficult to recruit the position from within the State of Illinois. Recruiting these specialists from Illinois may be facilitated by the recreation programs currently operating at the University of Illinois and Southern Illinois University. Local governments in Illinois expect by 1975 to be hiring at least 160 recreation specialists over and above the currently budgeted positions.

Park districts in the five-county area also employ a handful of landscape engineers, who are required to have a Bachelor's degree. The districts report that this occupation is difficult to recruit, especially from within Illinois. That this position is not as crucial to the operation of local governments as the two previously discussed is indicated by the fact that there may be less than 10 landscape engineers in all local governments in Illinois.

In the natural resources area, local governments in Illinois maintain a small number of positions that can be classified under the category of naturalist. These include foresters, agricultural economists, arborculturists, botanists, and naturalists. All of these positions generally require undergraduate degrees in appropriate majors, and as

Table 33

Local Government Employment in Parks and Recreation, by Region, 1967

Region	No. of Employees	% of Statewide Total
1	6298	87.01
2	176	2.43
3	70	.96
4	134	1.85
5	203	2.80
6	104	1.43
7	44	.60
8	134	1.85
9	75	1.03

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of governments.

may be expected, are difficult positions to recruit. Little more can be said of these occupations, for the rate of response from governments utilizing them is somewhat low. Yet, it can be expected that the difficulty of recruiting these occupations should not be abated by the year 1975, and a substantial increase over current employment levels might be the case.

Overall Employment in Parks and Recreation

Most of the employees in the parks and recreation function are to be found in the region of northeastern Illinois, and two-thirds are employed by the Chicago Park District, which is the fourth largest special district in the United States.[1] The remainder of the employees in this function are spread throughout the remainder of the state with concentrations of employees in areas of urban density.[2] Since detailed data, other than statewide totals, are not available for any year other than 1967, it is not possible to analyze the growth in this function by region. Yet, it is possible to analyze the function for the entire state. In can be observed from statewide employment totals for 1957, 1962, and 1967 that this function has remained relatively stable for the three years considered with only a slight decline for 1967.[3] The explanation for this phenomenon is that lesser numbers of people are needed to maintain park systems because of the improvement in maintenance equipment. If Census Bureau data contained break-downs on occupations in this function, it would probably show a decrease in the number of maintenance employees and an increase in the number of persons performing direct recreation duties.

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[1] U.S. Bureau of the Census, Employment of Major Local Governments, Vol. 3, 1967, p. 180.

[2] See John D. Sinnott and Joseph J. Bannon, Directory of Public Park and Recreation Personnel in Illinois, Urbana: Department of Recreation and Municipal Park Administration, University of Illinois, 1967.

[3] See Table B-1 in Appendix B for employment totals by function.

B. Community Development and Housing

In comparison to the total operations of local governments, most community development and housing functions are relatively young and small. The majority of the cities have human relations councils and commissions, but as yet these agencies do not have very much in the way of professional staff. In the future, however, the staffs of various community relations commissions and departments will surely increase, especially in those cities that will be receiving money from the Model Cities Program. Unfortunately for the following analysis, data has not been received from the City of Chicago concerning PAT manpower in the area of community development and housing.

Local respondents report that there are twenty-three persons in their governments who are classified as community organization and community relations specialists. Most of these positions require the person performing the duties to have a Bachelor's degree in a work-related area. Most of the employees are found in municipalities and municipal officials report that these positions are only moderately difficult to recruit. The projections made by local officials can only be used as impressionistic evidence of the future growth of this function because they did not, to the extent reported for other functions, venture estimates of the number of community organization and relations specialists that would be needed in 1975, except for the municipalities in the 88 non-urban counties. These cities have reported that they expect to hire double the number of community organization specialists that are presently employed in their governments. What this figure means is that many of the municipalities not currently employing community specialists may begin to do so by the year 1975.

Table 34

Difficulty of Recruitment for Community Development and Housing PAT Occupations

Position	Difficulty Score
1. Building Inspector	1.69
2. Community Organization Specialists	1.64

Table 35

Projected Growth for Community Development and Housing PAT Occupations in 1975

Occupation	Projected % Growth
1. Community Organization Specialist	44
2. Building Inspector	41

When the questionnaire was drafted for this study, the position of housing specialist was listed under community development, and the position of building inspector was listed in an "all other" category. In completing the questionnaire, local officials tended to confuse the two occupations. It is clear from the responses that the housing specialist was interpreted as a building inspector or superviser in many cases. Educational requirements were noted as being the same for the handful of housing specialists, as for building inspectors. Thus, the positions of housing specialist and building inspector are combined into one category of building inspector for purposes of this analysis.

Responding local officials reported that there are currently well over one-hundred positions of building inspector that require two years of post-high school training or equivalent experience. Most of these persons are employed by municipalities, with nearly a majority of them reported by governments in the five-county area. 25 percent of these positions are employed in governments in the other nine urban counties, while less than 20 percent required to have educational experience and training are employed by the remaining 88 counties in the state.

These positions are rated by local officials as only moderately difficult to recruit with there being little variation from urban to non-urban counties. The moderately low rating on the Area-of-Recruitment Scale suggests that these positions are usually recruited from within the community being served. With respect to projected needs for the year 1975, the occupation of building inspector seems to be one of great growth. Local officials from a large number of municipalities report that 50 percent more building inspectors will be hired by the year 1975. With this position already in substantial numbers, many more qualified persons should be trained in this area. Venturing a rough estimate, 75 new positions will be created to meet needs over and above the current level of employment. Thus, since the position of building inspector is relatively low in education and training requirements, the possibility for in-service training and shorter-term, full-time institutes should be seriously considered by educational planners in Illinois.

Overall Employment in Housing and Urban Renewal

Employment in the area of housing and urban renewal is most heavily concentrated in those parts of the state having large numbers of the population in the category

Table 36

Local Government Employment in Housing and Urban Renewal, by Region, 1967

Region	No. of Employees	% of Statewide Total
1	2270	81.15
2	53	1.89
3	76	2.71
4	67	2.39
5	49	1.75
6	52	1.85
7	7	.25
8	134	4.79
9	89	3.18

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of Governments.

of the disadvantaged. Groups of disadvantaged in the State of Illinois are located mainly in the core area of the Chicago region and in the Metro-East (East St. Louis) area of Region Eight. Over 80 percent of the employees in this function are employed in the Chicago region, with a majority found in the Chicago Housing Authority. Far ahead of any of the other downstate regions is Region Eight (Madison and St. Clair counties). There are approximately five percent of the total number of housing and urban renewal employees in this region. Most of these employees are found working for local governments in St. Clair county.

Detailed statistics are not available for any year other than 1967, so that it is not possible to chart the growth of employment in this area by region. Statewide totals for the years 1957, 1962, and 1967 indicate that the housing and urban renewal area has had a steady growth, although the growth rate dropped off somewhat from 1962 to 1967. If present trends continue, this function will employ 3671 persons thoughout the entire state by 1975, and increase over 1967 of 31 percent.[4]

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[4] See regression data table and explanation in Appendix B.

Chapter Eight

THE FUNCTIONS OF HIGHWAYS, SANITATION, AND UTILITIES

A. Streets and Highways

The streets and highways function is performed by counties, municipalities, and townships. PAT manpower in this function are employed almost exclusively by county and municipal government. Whereas the townships performance of highway functions is significant in respect to all functions performed by townships, the duties performed by townships in this area are mainly maintenance. Townships thus have very few professional employees in this function. The occupations to be discussed are: public works administrator, civil engineer, and engineering technician and draftsman. The public works administrator is being separated from the working civil engineer in accordance with our research policy of trying for each function to analyze the needs for top administrators separately from the line employees.

The public works administrator is usually a civil engineer who has a Bachelor's degree. His main function is to supervise the building of county and municipal roads as well as directing their maintenance. The supervision exercised by the public works administrator is not necessarily over only the function of streets and highways. In some of the smaller municipalities of the state, public works administrators are also general supervisors of other functional areas, such as the building function or water service. Three-fifths of the full-time public works administrators are employed in the northeastern five-county area. Of the 85 public works administrators reported by local governments in the state, only one position was vacant at the time of our survey. Local officials report that the public works administrator is a less difficult position to fill than either the civil engineer or the engineering technician and draftsman. It seems that the pressing need for public works administrators and the difficulty of recruitment of this position may be misleading because the public works administrator may be elevated to that position from the ranks of a line civil engineer. Difficulty of recruitment and pressing need may be more meaningful if we look at the position of civil engineer.

The position of civil engineer is one of the most abundant in Illinois local government. A Bachelor's degree is required for almost all positions of civil engineer. Nearly 90 percent of these employees are found in the five-county area. A majority of these engineers are employed by the Cook County Highway Department. The 2.16 difficulty rating for the position of civil engineer ranks that occupation as one of the most difficult to recruit in local government. Such a rating for difficulty of recruitment must be considered especially high when it is noted that the position of civil engineer is one of the most abundant in Illinois local government. The civil engineer also ranks high in the difficulty of recruiting from the immediate area which indicates that recruitment for these positions must of necessity, many times, go beyond Illinois boundaries. Difficulty in recruiting these positions can readily be seen by noting that one-fifth of the budgeted full-time positions are presently unfilled.

A felt inability of officials in the larger governments to project the number of civil engineers that would be needed over and above those presently employed creates difficulty in giving an over-all projection of high reliability. The researchers

Table 37

Location of PAT Occupations of Streets and Highways in Illinois Local Governments

	Percentage in Chicago Area	Percentage in Other Urban Counties	Percentage in Non-Urban Counties
1. Public Works Administrator	62	19	19
2. Civil Engineer	90	4	6
3. Engineering Technician and Draftsman	91	4	5

Table 38

Difficulty of Recruitment for Streets and Highways PAT Occupations

1. Civil Engineer	2.16
2. Engineering Technician/ Draftsman	2.07
3. Public Works Administrator	1.82

find it interesting that the downstate counties see an increasing need for civil engineers by 1975. In the nine downstate urban counties it is reported that 20 percent more civil engineers will be in the employ of their governments, and the non-urban counties in the state expect to have 50 percent more civil engineers by the year 1975. This would seem to indicate that many of the highway departments that are now minimally professionalized, plan to upgrade their highway and street personnel by 1975.

An increasingly important position in the streets and highways function is that of the supporting engineering technician and draftsman. This occupation is one that usually requires two years of post-high school training in the technical area of drafting, and in some cases, three or more years training as an associate to a civil engineer. Such training is usually received at technical institutes that conduct programs especially for this purpose. Local governments report that the engineering technician and draftsman is in about the same abundance as the civil engineer. Localities also report that the position of engineering technician and draftsman is extremely difficult to recruit, nearly as difficult as the position of civil engineer. More encouraging to educational planners and others is that the engineering technician and draftsman is more likely to be recruited from the boundaries of Illinois than is the civil engineer. However, in light of findings concerned with mobility and education, it is not unexpected to have an engineering technician and draftsman recruited from the more immediate areas.

The position of engineering technician is one for which Illinois local governments have a most pressing need. This seems well indicated by reason of nearly one-quarter of the positions of engineering technician and draftsman being presently vacant. There seems to be no relief from this trend because local officials indicate that engineering technicians and draftsman will be hired at an increased rate for 1975. As in the case of civil engineers, it is difficult -- perhaps even impossible -- with the data collected to estimate the additional number of technicians needed in 1975, because some of the larger local governments have not felt capable of projecting. However, the downstate localities have been willing to project, and they indicate clearly that greater numbers of engineering technicians and draftsman will be needed, in relation to the number of civil engineers. Thus, the planners of junior college curricula might well consider the possibility of expanding programs for training engineering technicians and draftsman in the highways and streets functions.

Overall Employment in Highways

Local government employment in the highway function has been a perplexing phenomenon to explain. From 1957 to 1962, the number of employees in the local streets and highways function increased from approximately 9,000 to a total of 14,000. But from 1962 to 1967, the local highway function lost approximately 1,000 employees, according to data collected by the U.S. Census Bureau (Table 40). Almost all of this loss is accounted for by the decrease of nearly 1400 employees in the Chicago region (14% decrease from 1962). We have not been able to find any rationale that would account for this large decrease in northeastern Illinois. In the remaining eight regions, employment in the highway function has remained around its 1962 level. In fact, in only two of the eight regions considered has the percentage change been greater than 10 percent. Otherwise, three of the regions have decreased by a few employees, while three other regions have increased by a few employees. The figures in Table 40 indicate that local governments are generally holding the line on total employment in the highway and local street function.

In spite of the decrease of nearly 1400 employees between 1962 and 1967, the local governments in the Chicago region still employ more persons in the highway

Table 39

Local Government Employment in Highways, by Region, 1967

Region	No. of Employees	% of Statewide Total
1	8051	62.13
2	823	6.35
3	557	4.29
4	496	3.82
5	834	6.43
6	472	3.64
7	428	3.30
8	769	5.93
9	527	4.06

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of Governments.

function than do all of the other local governments of the state combined (Table 39). The Chicago region is followed by Region Two in northern Illinois and Region Five in western Illinois, with over 800 employees. As expected, the highway function is reasonably well distributed throughout the entire state with the number of employees roughly proportional to the population of the areas they serve.

Table 40

Growth of Local Government Employment in Highways, by Region, 1962-1967

Region	Change in Number of Employees	% Change
1	-1389	-14
2	73	9
3	21	3
4	-18	-3
5	120	16
6	59	14
7	-12	-2
8	40	5
9	-35	-6

Source: Compiled from worksheets of the 1967 Census of Governments and publications of the 1962 Census of Governments of the U.S. Census Bureau.

B. Sewage and Sanitation

The duty of policing our wastes in a crowded urban society requires skills that are not visible to the ordinary citizen. In Illinois, this function is performed mainly by the special district governments. A giant of these operations is the Chicago Metropolitan Sanitary District, which in 1967 was the tenth largest special government in the country.[1] The District has many job titles and grades for positions in its employ. In fact, the District is so large that its general control staff is larger than that found in Illinois local government outside Cook County. The Metropolitan Sanitary District, as well as other sanitary agencies, employ a large number of highly trained and specialized employees. Most of these are found in the counties of the Chicago metropolitan area; however, there are significant supplies of these employees currently working in downstate governments and there will be need for greater numbers in the future.

The position of chief executive in the sanitary function is usually held by an individual with a Bachelor's degree, and in a good number of cases is held by a person with a graduate degree. He is usually recruited from the line position of sanitary engineer. Over 60 percent of the top professional sanitary executives are employed by local governments in the five-county area. Local officials report that the sanitary executive is a difficult position to fill. Less than five percent of these positions are currently vacant which indicates that the pressing need and difficulty of recruitment may better be reflected in the figures for line engineers in this function.

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[1] Bureau of the Census, Employment of Major Local Governments: 1967, Vol. 3, (Washington, D.C.: U.S. Government Printing Office, 1969), p.180. The Metropolitan Sanitary District "covers about 50 percent of the land area and about 95 percent of the population and assessed value in Cook County" according to Glenn W. Fisher and Robert P. Fairbanks, Illinois Municipal Finance (Urbana: University of Illinois Press, 1968), p.23.

The design of the project questionnaire attempted to distinguish between a sewage-disposal engineer and a sanitary engineer. Such a distinction involved one of differentiating the function of sewage disposal from that of the other functions in sanitation. More specifically, identifying a "sanitary engineer" and a "sewage-disposal engineer" on the questionnaire confused a number of respondents. Responding agencies concerned exclusively with sewage maintained both sanitary and sewage-disposal engineer positions. Thus, in order to give a realistic picture of the PAT manpower in this function, we found it necessary to combine sanitary and sewage-disposal engineering positions for purposes of analysis.

The position of sanitary engineer usually requires a degree from an accredited school which has a program in engineering. Moreover, many of the upper level positions require graduate training as well as substantial amounts of experience. The engineers who work in the Metropolitan Sanitary District have varying educational backgrounds in engineering. Most backgrounds are in sanitary and civil engineering, but the engineering degree could have been obtained in hydraulic, structural, electrical, or mechanical engineering. Of the engineers working in local government districts, 85 percent work in the five-county area, with six percent working in the other urban counties and the remaining nine percent spread throughout the remainder of the state. The competition for professional engineers in the sanitary area is quite intensive. This situation can readily be seen when it is observed that over 20 percent of the current budgeted full-time positions are presently vacant; most of these unfilled positions are with the Metropolitan Sanitary District.

Table 41

Location of PAT Occupations of Sewage and Sanitation in Illinois Local Government

Occupation	Percentage in Chicago Area	Percentage in Other Urban Counties	Percentage in Non-Urban Counties
1. Sanitary Executive	62.5	10	17.5
2. Sanitary Engineer	85	9	6
3. Technician	98	1	1

Table 42

Difficulty of Recruitment for Sewage and Sanitation PAT Occupations

Occupation	Difficulty Score
1. Sanitary Executive	2.07
2. Technician	2.00
3. Sanitary Engineers	1.93

Table 43

Projected Growth for Sewage and Sanitation PAT Occupations in 1975

Occupation	Projected % Growth
1. Sanitary Executive	3
2. Sanitary Engineer	43
3. Technician	86

The sanitary engineer is rated as difficult to recruit, but there is variation throughout the state. Twenty responding governments in the five-county area rate this position as less difficult to recruit than do 24 downstate sanitary districts. Whereas this occupation is somewhat less difficult to recruit than other engineering positions, it seems to be a bit more difficult to recruit engineers from within the State of Illinois for sanitary operations, as indicated by the 1.50 rating on the area-of-recruitment scale. The position of engineer in the sanitary district function is one for which local officials project a substantial growth. Local respondents have projected increases of 40 percent in regard to positions of engineer in the sanitary function. With the 250 or so engineers working in this capacity already, the projected growth appears to be substantial indeed. As persons become more densely settled in the urban areas, the function of sewage and sanitation will probably receive increasing attention.

A few biologists, microbiologists, and chemists are employed in the sanitation and sewage function. Most of these are required to have graduate degrees or at least a Bachelor's degree, and most are employed in the five-county area. These occupations are difficult to recruit and not easily recruited within the State of Illinois. Although the projections are at best impressionistic, there seems to be a future demand for persons trained in these life science areas.

The size of the operation of the Metropolitan Sanitary District requires a significant amount of supporting technical help. These positions, which require two to four years of post-high school training in most instances, have been combined into two occupations for purposes of the folowing analysis. The technician and trainee positions require two years of post-high school training, and individuals in these positions perform supporting work for the line engineers, such as making sketches and assisting in the more routine laboratory work. There are over 130 positions currently filled in this category in the District, and budgeted full-time positions for 10 percent more. Respondents of the Metropolitan Sanitary District rate the position of technician as moderately difficult to recruit, but note that most are recruited from the immediate area. Projections by officials in the District and other downstate districts indicate that the position of technician is one which will grow significantly in the years to come. Impressionistic evidence suggests that more than 75 percent more trained technicians will be needed by 1975.

The position of treatment plant operator exists in most of the governments that perform sanitary functions; however, this occupation is required to have two years of post-high school training only in the Metropolitan Sanitary District and a few others. Nearly all individuals who work as treatment plant operators for the Metropolitan Sanitary District are required to have three years of study in an accredited engineering course or equivalent experience. Supervisory treatment plant operators are required to have a Bachelor's degree. There are over 80 of these positions presently filled. A number of sanitary districts other than the Metropolitan Sanitary District in the five-county area have noted that by 1975 they expect significantly to increase the number of sewage treatment operators who are required to have at least two years of post-high school training. These districts have noted that they expect to hire 175 percent more treatment plant operators than are currently employed. However, many of these districts presently employ persons to handle these duties who are not required to have at least

Table 44

Local Government Employment in Sewerage and Sanitation, by Region, 1967

Region	No. of Employees	% of Statewide Total
1	6611	81.18
2	231	2.83
3	231	2.83
4	200	2.45
5	263	3.22
6	93	1.14
7	86	1.05
8	306	3.75
9	122	1.49

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of Governments.

two years post-high school training. This very high percentage increase (175%) is due to the very low base from which we begin at this point in time. The actual number of sewage treatment operators in addition to the employees currently on the payroll would amount to only 15 more than are presently employed in districts other than the Metropolitan Sanitary District.

Overall Employment in Sewage and Sanitation

Unlike the streets and highway function where counties, municipalities, and townships are all actively engaged throughout the state, more than 81 percent of the over 8,000 employees in the sewage and sanitation function work in the Chicago region. Population congestion there necessitates extensive sewage and sanitary operations for localities not under the control of the Metropolitan Sanitary District and the City of Chicago Bureau of Sanitation. Readers may be surprised to find that of this 6,600 total for the Chicago region, only about one-third are employees of the Metropolitan Sanitary District. As expected, Regions Seven and Nine with no urban counties within their boundaries have the smallest numbers of such employees. More specifically, there are only 122 employees engaged in this funtion in the 20 counties that compose Region Nine. Unavailability of detailed data for years other than 1967 does not allow analysis of regional growth.

C. Public Utilities

The function of public utilities includes local governmental operation of water, electric, gas, and transit systems. While the electric and gas operations are functions often performed by local governments in other states, this is not the case in Illinois.

The utility administrator in Illinois local governments usually has jurisdiction over the water department or district. In the five-county area, the utility administrator is usually required to have a Bachelor's degree or a combination of education and experience equivalent to a Bachelor's degree, while utility administrators in downstate municipalities are required, in many cases, to have two years of post-high school training and equivalent experience. Following an established pattern, two-thirds of all utility administrators are found in the five-county area. These specialists are in somewhat short supply for the five-county area in that well over one-fourth of the current budgeted positions have been reported as vacant.

The utility administrator is rated by local officials overall as a difficult position to recruit. However, there is a wide disparity in the difficulty rating from urban counties to the non-metropolitan counties of the state. In the 14 urban counties of the state, the position of utility administrator is rated as quite difficult to recruit. In the remaining counties of the state, however, the utility administrator is rated as far less difficult to recruit. This disparity in the difficulty of recruiting correlates with the educational requirements for the position. It seems safe to conclude that downstate municipalities and special districts make do with the personnel that is available in their areas.

Governments performing the water supply function have in their employ a number of persons who are specialized in the matter of purification. Such purification specialists are usually required to have a Bachelor's degree and are responsible for the chemical content of the water in order to make it palatable for drinking purposes. Most of the specialists are employed by the City of Chicago with a few found in other governments in the five-county area, and a handful being employed in the downstate areas. All governments that report hiring purification specialists have noted that the occupation is difficult to recruit, with about ten percent of budgeted positions now vacant.

Table 45

Location of PAT Occupations of Public Utilities in Illinois Local Governments

Occupation	Percentage in Chicago Area	Percentage in Other Urban Counties	Percentage in Non-Urban Counties
1. Utilities Administrator	67	23	10
2. Purification Specialist	94	3	3
3. Electrical Engineer	94	1.5	4.5

Table 46

Difficulty of Recruitment for Public Utility PAT Occupations

Occupation	Difficulty Scale
1. Electrical Engineer	2.20
2. Purification Specialist	2.00
3. Utilities Administrator	1.83

Table 47

Projected Growth for Public Utility PAT Occupations in 1975

Occupation	Projected % Growth
1. Utilities Administrator	N.D.
2. Purification Specialist	5
3. Electrical Engineer	23

The occupation of electrical engineer will be discussed in this section because it is so frequently found in units performing utility functions. The electrical engineer is required to have a Bachelor's degree from an accredited engineering school, and 95 percent of such employees are located in the five-county area. The position is a difficult one to recruit, and it is noted as one of the more difficult to recruit from the State of Illinois. It has a projected growth of 20 percent by the year 1975.

Also, a handful of other occupations, such as power specialist and meteorologist, are noted as PAT manpower in the utility area, but the occupations are employed in such few numbers that the usual analysis would not lead to anything meaningful.

Failure to receive co-operation from a statewide airport association and otherwise lacking information about the larger airport operations in the state, leaves the researchers with insufficient data to discuss airport PAT manpower.

Overall Employment in Water Supply and Other Utilities

Water supply employment data is subject to the same type of inconsistency that is found in the health and hospital area, that is, regional employment is dependent upon whether public or private interests provide the water supply. As will be seen in Chapter Nine, employment in the health and hospital function in Region Six comprises less than one percent of total statewide local employment. However, in the case of water supply, over five percent of total statewide employment is found in Region Six (Table 48). This factor is a result of the water supply function being provided by a number of local governments in the area, more so than is the case in some other regions of the state and in contrast to the function of health and hospitals.

Table 48

Local Government Employment in Water Supply, by Region, 1967

Region	No. of Employees	% of Statewide Total
1	4031	71.23
2	228	4.02
3	148	2.61
4	99	1.74
5	320	5.65
6	293	5.17
7	109	1.92
8	198	3.49
9	233	4.11

Source: Compiled from worksheets of the U. S. Census Bureau's 1967 Census of Governments.

Employment in water supply increased mainly in the Chicago region during the years from 1962 to 1967 (Table 49). Greater numbers are also being employed in Regions Five, Six, and Nine, while Regions Two and Four in the north and east central area of the state report large losses. One explanation for this reduction in the number of employees may be a result of some public water districts merging with privately owned water agencies. We have a fairly high degree of confidence in this explanation since several of the one-time water districts reported that they had merged into a private water supply company and were no longer a governmental unit. By 1975, approximately

Table 49

Growth of Local Government Employment in Water Supply, by Region, 1962-1967

Region	Change in Number of Employees	% Change
1	242	6
2	-26	-10
3	-9	-5
4	-38	-27
5	40	14
6	73	33
7	-12	-9
8	-3	-1
9	44	23

Source: Compiled from worksheets of the 1967 Census of Governments and publications of the 1962 Census of Governments of the U. S. Census Bureau.

5,644 individuals will be engaged in this professional function throughout Illinois.[2]

In the category of "other utilities" are included those of electric power supply, gas supply, and operation of transit systems. Except for the services provided by the Chicago Transit Authority, local governments in Illinois do not generally engage in this type of function. The number of individuals employed by Illinois local governments in the electric power supply area is less than 1,000 while the number of employees in

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[2] See regression data table and explanation in Appendix B.

Table 50

Local Government Employment in Other Utilities, by Region, 1967

Region	No. of Employees	% of Statewide Total
1	12509	94.65
2	84	.63
3	39	.29
4	36	.27
5	28	.21
6	283	2.14
7	59	.44
8	75	.56
9	102	.77

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of Governments.

the supply of gas is far less than 100, although the precise figures for each of these functions for 1967 are not available as of this writing. The domination of this analytical category by the Chicago Transit Authority can be noted by pointing out that 95 percent of the total statewide employment in this "other utilities" category is in the Chicago region. The Chicago Transit Authority employs over 12,000 persons, and most are non-PAT positions involved directly in the transit function. Only in Region Six is there a sufficient number of "other utilities" employees so that they amount to more than one percent of the statewide total.

Table 51

Growth of Local Government Employment in Other Utilities, by Region, 1962-1967

Region	Change in Number of Employees	% Change
1	-287	-2
2	-1	-1
3	-22	-36
4	6	20
5	-8	-22
6	-2	0
7	7	13
8	-18	-19
9	-7	-6

Source: Compiled from worksheets of the 1967 Census of Governments and the 1962 Census of Governments of the U. S. Census Bureau.

Chapter Nine

THE FUNCTIONS OF PUBLIC WELFARE AND HEALTH AND HOSPITALS

A. Public Welfare

The function of public welfare is performed nearly exclusively, among Illinois local governments, by county units. As previously stated, the rate of questionnaire return for county governments has been relatively low. Even so, meaningful figures for analysis have been reported from the northeastern five-county area, especially from the Cook County Department of Public Aid. In addition, we have selected returns from downstate so that some impressionistic findings can be related. The lack of comparable data for the downstate welfare units is not due only to the low rate of response, but also to the State of Illinois having direct jurisdiction over many public welfare services comparable to those performed by the Cook County Department of Public Aid. PAT public welfare employees in downstate counties are moderately difficult to recruit and are usually hired from within their local areas. As stated above the low return rate makes it difficult to assess the positions for which there are the most pressing needs and the number of employees needed in the future. However, since county area statistics from the U.S. Census Bureau are available for the total number of employees engaged in the public welfare function, some parameters of manpower prospects and problems in the public welfare function will be discussed for downstate counties. The following discussion chiefly will outline manpower problems of the Cook County Department of Public Aid and related welfare operations.

Responding local officials have commented that the position of public welfare administrator is among the more difficult positions to fill. On a difficulty-of-recruitment scale running from one to three, the public welfare administrator in the five-county area was given a relatively high ranking of 2.57. The overall rating of difficulty in recruiting a public welfare administrator is lower because downstate counties experience less difficulty in recruiting these individuals.

The social worker with a Bachelor's degree is the public welfare position which is greatest in number in Illinois local government, comprising nearly three times the number of employees of any other single occupation. Since over 10 percent of these positions are currently unfilled, the social worker in local government with a Bachelor's degree is an occupation for which there is a most pressing need.

Social worker with a Master's degree is a position in which there are far fewer employees, but is the occupation most difficult to recruit and maintain filled. The 2.50 rating regarding difficulty in recruitment is among the highest for any occupation of local government (Table 52). Although actual tenure and turnover data are not available, it seems that the social worker with a Master's degree is one of the most difficult positions to hold in employ. This inference is made on the basis of nearly 45 percent of the currently budgeted full-time positions being vacant. The 1.80 rating on the area-of-recruitment scale indicates that this position is among the most difficult to recruit from within Illinois, and that the departments employing this occupation frequently have to recruit from outside the State. As in the case of other types of social workers, confident projections of need are not possible because the

Table 52

Difficulty of Recruitment for Public Welfare PAT Occupations

Occupation	Difficulty Score
1. Social Worker (M.S.)	2.50
2. Case Worker Supervisor*	2.50
3. Public Aide Representative*	2.50
4. Welfare Rehabilitation Worker*	2.50
5. Social Casework Instructor*	2.40
6. Public Welfare Administrator	1.94
7. Social Worker (B.S.)	1.90
8. Home Economist*	1.50

*All of these occupations are nearly exclusive to the Cook County Department of Public Aid.

Cook County Department of Public Aid could not predict the number of employees it would need in 1975. Yet, with the increasing emphasis on greater education, it seems that the demand for social workers with Master's degrees will increase at least proportionately to the general demand for persons with graduate education. Census Bureau information concerning the accelerated growth in employment in the function of public welfare seems to indicate that persons with greater skills will be needed to administer programs ofgreater complexity and having a greater number of employees.

Large public aid departments such as that in Cook County have increasingly required more specialized personnel. One of the work-skills that has been employed to supplement the traditional occupations in public welfare is that of the home economist. This position, usually requiring a Bachelor's degree in home economics or nutrition, is used to educate households concerning proper diet and/or physical care and management of the home. In Cook County the respondent noted 44 positions of home economist budgeted, with approximately one-quarter presently being unfilled. The two governments employing home economists disagree on the difficulty of recruiting, resulting in the position being rated moderately difficult to fill.

Another more specialized occupation in the welfare area is that of public aid representative. A person performing this function has a number of duties including the evaluation of decisions made by the field representative, performing investigative tasks, and determining who may qualify for public assistance. The position requires either Bachelor's or Master's degrees with the latter being required for higher levels. When the questionnaire was tabulated, it was found that 41 positions of public aid representative were budgeted, with approximately 12 percent being vacant. Public aid representative is among the most difficult of positions to recruit, with the result that the recruitment area often stretches beyond the boundaries of Illinois.

Another position for which it is difficult to recruit is that of social case work instructor who is responsible for in-service training of currently employed personnel. Individuals holding this position are required to have a Master's degree with some specialization in the field of education. Educational functions performed by these workers not only include conducting of orientation meetings and seminars but also the development of instructional materials for use in the training of currently employed workers in public welfare. As an occupation which requires such extensive and diversified educational experience, it is not surprising that the social casework instructor is quite difficult to recruit and especially so within the State of Illinois.

The magnitude of welfare operations in Cook County makes for an administrative structure in which there are over 400 budgeted positions for supervisors of casework. This position requires at least a Bachelor's degree. Persons engaged as supervisors perform the usual supervisory tasks of reviewing rule and regulation compliances and scrutinizing staff work as well as evaluating plans for granting assistance. As is typical for most of the positions falling within the public welfare area, the recruitment area for such supervisors tends often to be beyond the boundaries of Illinois.

A final occupation to be considered in the area of public welfare could also be placed in the next section of this chapter, since it is also closely related to the health function. Persons holding this position, that of welfare rehabilitation worker, are responsible for referring to local, state, and federal agencies, individuals who seem to have potential skills which could be upgraded, thereby potentially enabling them one day to be removed from the welfare rolls. For instance, welfare rehabilitators are responsible for screening applicants who may be referred to manpower development and training offices of the federal Department of Labor. Individuals functioning as welfare rehabilitation workers are expected to have a Bachelor's degree and are needed in fairly large numbers. Cook County, alone, reports that over 150 of these positions are presently budgeted with nearly 10 percent unfilled.

Table 53

Local Government Employment in Public Welfare, by Region, 1967

Region	No. of Employees	% of Statewide Total
1	5801	73.07
2	560	7.05
3	408	5.13
4	290	3.65
5	431	5.42
6	124	1.56
7	43	.54
8	166	2.09
9	115	1.44

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of Governments.

This helps to explain the 2.50 rating on the difficulty-of-recruitment scale (Table 52).

Overall Employment in Public Welfare

The welfare function, as other functions, is highly concentrated in the Chicago region, which accounts for nearly three-quarters of all welfare employees (Table 53). Most such employees in the Chicago region are employed by the Cook County Department of Public Aid. Substantial numbers of employees in the remaining regions of the state engage in the welfare function, especially in the urban counties where the numbers of disadvantaged are the largest.

As is the case with some other functions, it is not possible to analyze regional growth in this area because detailed figures are not available for years other than 1967; however statewide figures do exist for the years 1957, 1962, and 1967. From these data it is apparent that public welfare employment growth has been one of the most accelerated. For example, in 1957, the number of employees in public welfare stood at about 4,000 for the whole State of Illinois. In 1962, this number had reached about 5,500, and by 1967 the function had mushroomed to include nearly 8,000 persons. Of all local government functions, the public welfare function has experienced the greatest increase in size. To illustrate, local governments in 1957 employed far more persons in the areas of parks and recreation and water supply than it did in public welfare, but by 1967, the number of employees in public welfare exceeded those other functions. If present employment trends continue, the public welfare function will engage more workers than the functions of sewage and sanitation and fire protection. By the year 1975, public welfare with a projected 10,732 employees will quite likely rank among the top five functions in terms of the total number of local employees, behind the functions of police, health and hospitals, general control, and highways.[1]

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[1] See regression data table and explanation in Appendix B.

B. Health and Hospitals

The health and hospital function is usually perceived by the general public as being one of the most important performed by local government. This is the case because of the demand for help in matters that affect the lives of individual citizens. The ordinary individual expects a great deal of professional experience and know-how to be brought to their tasks by persons working in the area of health and hospitals. For most positions in this function, there is an immediate pressing need as well as a future need. This demand will grow, according to a statement included in the questionnaire returned by the Suburban Cook County Tuberculosis Sanitarium District which said: "We face a very real shortage of PAT personnel now, with inexorable growth of the problem."[2]

The efforts at data collection for this function were not as vigorous as those for other areas. As mentioned in Chapter Two, the researchers learned, after the first mailing of their questionnaire, of a thorough study of health needs in the State of Illinois, that had been recently completed.[3] However, we received from the first mailing a good deal of information concerning the health personnel needs of local government operations. Reliability of any of the inferences will not be as high as those of most other areas discussed, but we believe that some worthwhile information can be noted. The reader should be cautioned that the following comments are not necessarily representative of the Cook County area. Operation of the hospital function by the government of Cook County is on such a large scale that the administrators at most of the hospitals felt that they could not spare the time to complete our questionnaire. Apparently, they do not keep statistics in such a way that the information could be easily presented in response to a questionnaire, and in light of the recent study submitted to the State Board of Higher Education, this desire not to participate in the present study is understandable. The reader might more appreciate the size and complexity of the Cook County hospital operation when it is noted that it includes a 23-building complex. As a final comment, consideration was given to separating the function of public health from the hospital function, but this thought was abandoned. Such a procedure was not followed by reason of the duplication of occupations, that is, the researchers would be describing many of the same occupations in two sections if health and hospitals had been handled as two functions.

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[2] See also Neal H. Rosenthel, "The Health Manpower Gap: A High Hurdle," Occupational Outlook Quarterly, Vol. II, No. I (February, 1967), pp. 1-5.

[3] Illinois Board of Higher Education, Education in the Health Fields for State of Illinois, Two Volumes, Springfield: 1968.

Local government supply and needs for PAT occupations in the function of health and hospitals is determined by whether or not the hospital function is performed by a local public body. Our data and the Census Bureau data show large expenditures in some counties and practically nothing in others. This can be explained when it is realized that some counties perform the hospital function as a public function while in others it is performed on a private basis, not as a governmental operation.

The position of public health physician (M.D.) is a most critical one. This individual is responsible for the direction and administration of health services for a locality. He is highly trained and ordinarily well-respected by the public at large. Ninety percent of the full-time public health physicians are located in the five-county

Table 54

Location of PAT Occupations of Health and Hospitals in Illinois Local Government

Occupation	Percentage in Chicago Area	Percentage in Other Urban Counties	Percentage in Non-Urban Counties
1. Public Health Physician	91	8	1
2. Other Physician	87	8	5
3. Dietician	40	53	7
4. Bacteriologist	100	--	--
5. Sanitarian	92	3	5
6. Laboratory Technician	91	7.5	1.5
7. Registered Nurse	89	9	2
8. X-Ray Technician	58	37	5

area, with the City of Chicago employing most of these persons. This occupation is considered by local officials to be among the most difficult to recruit, especially in the non-urban counties of the state. It is one of those most pressingly needed by Illinois local governments, as indicated by over 25 percent of all current budgeted full-time positions being unfilled. In addition, this occupation also rates high on the area-of-recruitment scale. Local governments in the five-county area project the public health physician's role as being one of those to be greatly in demand in the year 1975. Responding officials in this area expect that their governments will seek to employ 50 percent more public health physicians than currently.

Physicians as such are employed by local governments mainly in the hospitals under the jurisdiction of counties. Most such positions are found in the Cook County

Table 55

Difficulty of Recruitment for Health and Hospitals PAT Occupations

Occupation	Difficulty Score
1. Bacteriologist	2.33
2. Other Physician	2.25
3. Sanitarian	2.10
4. Public Health Physician	2.10
5. Dietician	2.00
6. Laboratory Technician	1.88
7. Registered Nurse	1.73
8. X-ray Technician	1.73

area and are rated extremely difficult to recruit, but incomplete data does not allow projection of future needs.

Dieticians are often employed by hospitals. Dieticians are required to have a Bachelor's degree in dietetic science, home economics, or a closely related area. The position is rated as difficult to recruit, but there seems to be a wide variation in the difficulty from rural to urban areas. More specifically, the position of dietician is rated at 1.67 in the five-county area and as 2.17 in the 88 non-urban counties of the state. Nearly 15 percent of the current full-time budgeted positions of dietician are vacant. Most of these vacant positions are in the non-urban areas of the state.

Most of the bacteriologists in local governments in the state are employed by the City of Chicago. This occupation requires a Bachelor's degree in the area of bacteriology. The City of Chicago and other governments employing this occupation rate it as extremely difficult to recruit, and the responding governments noted that 10 percent of the budgeted positions of bacteriologist are unfilled. It is projected that the City of Chicago and other governments may by 1975 seek to hire 20 percent over and above currently budgeted positions, but difficulty in filling this projection is anticipated since the position is rated difficult to recruit from within the state.

The position of laboratory technician is found in the hospitals of local government as well as in the public health departments of municipalities. Most such positions requiring at least two years of post-high school training are found in the five-county area. A common response from local officials is that this position is moderately difficult to recruit and can generally be recruited from the State of Illinois. The projected growth of this occupation is 20 percent by the year 1975.

A special type of technician is one who specializes in the performance of X-rays. The X-ray technician is found in far smaller numbers than the laboratory technician, but it is rated nearly as difficult to recruit. A greater growth rate is expected for the position of X-ray technician (44%), but not nearly so many individuals will be hired in this category as will be hired as laboratory technicians.

The most abundant occupation in the health and hospital function (found twice as frequently as that of the laboratory technician) is that of the registered nurse, an occupation that requires two to four years post-high school training. Such persons are employed in both hospital districts and in municipal public health departments. Following the usual pattern, nearly 90 percent of all the registered nurses employed in Illinois local government are located in the five-county area. The remainder are spread throughout the state with concentrations in areas where the hospital function is performed by local governments. Overall, the position of registered nurse is a moderately difficult position to recruit, with greater difficulty for downstate areas. The current need for registered nurses can be appreciated by noting that nearly one-fifth of currently budgeted positions are presently vacant. Respondents indicated that 30 percent more nurses will be employed by local governments than the current number of employees. Since registered nurses are already numerous in Illinois local government, substantial additional numbers must be trained and attracted to local government service by the year 1975, if the projected increase of 30 percent is to be fulfilled.

A key position in the local public health function is that of the public health specialist, most often called a sanitarian. This occupation in local government is usually required to have a Bachelor's degree in a public health area, but often sanitarians are trained beyond the Bachelor's degree. Most in local units are in municipalities with the majority working for the City of Chicago. For an occupation widely employed in local government, the sanitarian is one of the more difficult to recruit (it rates 2.10 on the difficulty-of-recruitment scale). Local respondents have noted that they anticipate hiring 70 percent more sanitarians than are presently employed. As in the case of the registered nurses, this projected growth to the year 1975 represents a large number of individuals. It means that approximately 150 more sanitarians will be sought by local governments by the year 1975.

Local public health departments and hospital districts also employ a number of other occupations such as hearing clinician, public health educator, veterinarian, speech audiologist, hospital administrator, psychiatrist, and dentist. Although these occupations are hired in comparatively small numbers, they are each difficult to recruit and not always easily recruited from the State of Illinois. Impressionistic evidence leads us to project that these occupations, especially the occupation of public health educator, will be in great demand by the year 1975. For further information on both needs for these occupations and the recommendations that have been made to implement curricula for producing a greater number by 1975, we refer the reader to the above mentioned health committee report of the State Board of Higher Education.[4]

Overall Employment in Health and Hospitals

The function of health and hospitals has experienced a steady growth rate from 1957 to 1967 (Table 57). In 1957, the employees in this function in local government stood at over 12,000, and by 1967, there were over 17,000 persons employed. By 1975, we can expect nearly 19,000 individuals to be employed in this area.[5] For the purpose of interpreting the regional data it is important to understand that the hospital

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[4] Illinois Board of Higher Education, Education in the Health Fields for State of Illinois, Two Volumes, Springfield: 1968.

[5] See regression data table and explanation in Appendix B.

Table 56

Local Government Employment in Health and Hospital, by Region, 1967

Region	No. of Employees	% of Statewide Total
1	10891	62.88
2	1011	5.83
3	370	2.13
4	483	2.78
5	1372	7.92
6	107	.61
7	1208	6.97
8	657	3.79
9	1219	7.03

Source: Compiled from worksheets of the U.S. Census Bureau's 1967 Census of Governments.

function is performed by governmental units in some counties but not in others. If the hospital function is ordinarily performed by counties or special hospital districts in certain areas of the state, then regional totals will be a good deal greater than if this were not the case. For instance, Region Five and Region Seven have far more employees in the health and hospital function than do all other regions except the Chicago region. This situation is due to the disproportionately large number of government-operated hospitals in Five and Seven.

Table 57

Growth of Local Government Employment in Health and Hospitals, by Region, 1962-1967

Region	Change in Number of Employees	% Change
1	1106	11
2	-1	0
3	-45	-10
4	-76	-13
5	239	21
6	-5	-4
7	339	39
8	82	14
9	501	69

Source: Compiled from worksheets of the 1967 Census of Governments and publications of the 1962 Census of Governments of the U.S. Census Bureau.

As usual, the Chicago region has a majority of all the local government health and hospital employees with nearly 11,000. Most of these employees are found in the Cook County complex of hospitals. Local governmental employee increase has been especially pronounced in the rural areas of Western and Southern Illinois as indicated in Table 57, with Regions Five, Seven, and Nine experiencing the largest percentage change. In terms of absolute numbers, the increase has been greatest in the Chicago region with over 1100 local government employees added between 1962 and 1967; however, the total increase in Region One does not equal the numbers added in the remaining downstate area. Three of the downstate regions (Three, Four, and Six), experienced small decreases in this function. This is probably due to the expansion in hospital service being provided by hospitals with private governing bodies. For an analysis of the health and hospital function in which the private and governmental sectors have been combined, the reader is referred to the previously metioned comprehensive study submitted to the State Board of Higher Education in 1968.

Chapter Ten

THE FUNCTIONS OF LIBRARIES AND EDUCATION

A. Libraries

Local library operations in the State of Illinois vary from the most complex (City of Chicago) to the simple and uncomplicated operations of some rural downstate areas.[1] The Chicago public library system hires many specialized types of librarians, such as children's, serials, etc. On the other hand, the local library operations of some smaller downstate areas are administered by persons in the community who have little training in library science. One such librarian suggested that "we need a good basic library course, possibly at night, aimed at those of us who are trying to run good libraries without the benefit of any training." Local library districts do not serve all populated areas of the state, and this void is compensated for by the mobile operations of the State Library, which is under the direction of the Office of the Secretary of the State.

It was debated whether library PAT manpower should be discussed in terms of particular library specialities or whether we sould deal with the educational levels required by specific local governments which operate libraries. It was decided to employ the latter course, since library operations outside of the City of Chicago are far less complicated than those within the Chicago public library system. That is, the researchers would be doing only a study of the Chicago public library system if they optioned for dealing solely with specialities. Librarians in downstate municipalities more commonly tend to be generalists though they may have had training in a specialty. Finally, the researchers agree with Fisher and Fairbanks' comment that library functions are not always perceived to be under the direct control of municipal governments as is the case with other functions.[2] For instance, many cities have appointed boards that make library policy and are considered as distinct entities, although they do not have the legal status of a separate governmental unit. Thus, while a number of central municipal officies returned extremely useful questionnaires, the library function was often ignored. Whether this was due to inaccessability of the data or lack of understanding that a library board was not a separate government, we were unable to determine.

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[1] See "Statistics," Illinois Libraries, Vol. 50, No. 8 (October, 1968), pp.730-755; and also Betty Ohm and Mary West, "What Price Professionalism?" Illinois Libraries, Vol. 49, No. 5, (May, 1967), pp.384-397.

The position of professional librarian is almost exclusively employed by municipalities, with only a handful found in counties, special districts, and townships. Excluding the City of Chicago, professional librarians are required to have the following educational requirements: Master's degree, 45 percent; Bachelor's degree, 40 percent; and two to four years post-high school, 15 percent. The City of Chicago reports that it has 220 individuals in its employ who are librarians with Master's degrees or more extensive training. In addition, the Chicago library system has nearly one-quarter more budgeted but unfilled positions for graduate librarians. This shortage of manpower is not exclusive to the Chicago area. Eleanor A. Ferguson, Executive Secretary of the American Public Library Association, states that "the graduates in

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[2] Glenn W. Fisher and Robert P. Fairbanks, Illinois Municipal Finance (Urbana: University of Illinois Press, 1969), p. 54.

Table 58

Location of Professional Librarians in Illinois Local Governments

Occupation	Chicago Area	Other Urban Counties	Non-Urban Counties
1. Librarian	83	8	9

Table 59

Difficulty of Recruitment for Library PAT Occupations

Occupation	Difficulty Score
1. Librarian (B.S. or more)	2.00
2. Librarian (2-4 years)	1.64

1966 numbered 3,552, higher than in any previous year, but each could choose among five or more positions" thoughout the nation.[3]

Over 80 percent of the professional librarians are located in the northeastern five-county area. Nearly 10 percent of the balance are employed in governments within the nine other urban counties of the state, and the remaining 88 counties have less than eight percent of all professional librarians in Illinois. Librarians with the Bachelor's and Master's degrees are more difficult to recruit than those with two to four years post-high school training. The inability of the Chicago library system to project future needs makes it nearly impossible to relate total library personnel needs for the State of Illinois. However, the districts and municipalities in the downstate area have noted that they expect to hire more than 25 percent more librarians than are currently employed. Inasmuch as there are relatively few librarians employed in the downstate governments, it seems unlikely that local libraries will hire more than 25 professional librarians over and above those currently employed.

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[3] Eleanor A. Ferguson, "Public Libraries Developments in 1967," The Municipal Yearbook: 1968 (International City Manager's Association, 1968), p. 405.

Overall Employment in Libraries

The function of libraries is much like that of police protection in terms of service to urban and non-urban areas. More specifically, the state provides services in many areas where local government has not undertaken the function or has undertaken the function only minimally. Thus, it should not be surprising that approximately 72 percent of all local government employees in the library function are employed in the Chicago region. Most other employees are located in the regions of the most northern part of the state, i.e., Regions Two, Three, Four, and Five. Thus, persons in the southern half of the state are served only minimally in the library function by full-time local employees, while the remainder of the service is made up of the mobile units of the Secretary of State's State Library unit and what volunteer help that exists.

Detailed employment statistics in this function do not exist in readily available form for any year other than 1967, so that it is not possible to chart regional growth. Statewide data, however, tells us that the library function has experienced

Table 60

Local Government Employment in Libraries, by Region, 1967

Region	No. of Employees	% of Statewide Total
1	2220	71.84
2	213	6.89
3	135	4.36
4	121	3.91
5	128	4.14
6	85	2.75
7	46	1.48
8	86	2.78
9	56	1.81

Source: Compiled from worksheets of U.S. Census Bureau's 1967 Census of Governments.

a steady linear growth rate. Past trends indicate that this function will continue to expand in the years to come. From 1957 to 1967, the function of local libraries has added nearly 1,000 employees, from less than 2,000 to nearly 3,000. Finally, it is estimated that 3,839 PAT and other manpower will be involved in library work by 1975 within the State of Illinois.[4]

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[4] See regression data table and explanation in Appendix B.

Table 6l

Local Government Employment in Education, by Region, 1967

Region	No. of Employees	% of Statewide Total
l	90889	57.39
2	12928	8.16
3	8898	5.6l
4	95l8	6.0l
5	8983	5.67
6	5586	3.52
7	4482	2.83
8	107l4	6.76
9	6368	4.02

Source: Compiled from worksheets of the U. S. Census Bureau's 1967 Census of Governments.

B. Local Government Employment in Education

Although the function of education is not within the scope of this study, it seems to merit a few paragraphs since it accounts for approximately half of the local government employment in Illinois. Employment in the function of education is distributed in a way that is in proportion to the populations of regions of the state. For example, the percentage of employees working in the educational function in the Chicago

Table 62

Growth of Local Government Employment in Education, by Region, 1962-1967

Region	Change in Number of Employees	% Change
1	23513	34
2	2618	25
3	1798	25
4	2565	36
5	1223	15
6	820	17
7	537	13
8	2165	25
9	1130	21

Source: Compiled from worksheets of the 1967 Census of Governments and publications of the 1962 Census of Governments of the U. S. Census Bureau.

metropolitan region (Region One) is approximately the same as the percentage of the total statewide population which the region contains. A distant second to Region One is Region Two which has nearly 13,000 employees in the education function. Ranking lowest in the total number of employees in the education function is Region Seven (See Table 61).

All regions of the state have substantially increased total employment in education from 1962 to 1967. One of the most impressive figures in Table 62 is the percentage growth in Region One. In spite of a base figure in 1962 that far surpassed any of the other regions, the commitment to education has been forthcoming to such a degree that it is the second ranking region in respect to percentage employment growth. Only Region Four (Champaign) ranks higher. Considering absolute numbers, the Chicago region has absorbed far more additional educational employees than all other areas combined. It is estimated that approximately 207,826 persons will be employed in the education function within the State of Illinois by 1975.[5]

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[5] See regression data table and explanation in Appendix B.

Chapter Eleven

AFTERWORD

Going beyond the stated purposes of this study, it was felt that there might be some value in touching upon two related areas of PAT manpower recruitment. The rationale for this research has been that manpower needs of local governments should be studied in order to allow educational institutions to develop appropriate programs for training personnel who may now or in the future be needed. What has not been a concern heretofore in this report is how local governments handle recruitment. More explicitly, are Illinois local governments making use of recruitment means now available?

The first section of this chapter will examine campus recruitment activities by Illinois local governments. There are a variety of other ways in which local governments throughout the country approach the problem of recruitment. One recent innovation is a job listing entitled the Public Administration Recruiter sponsored by the American Society for Public Administration with Ford Foundation support. State and local governments may use this publication for purposes of recruiting qualified administrative personnel. A brief analysis of one issue for the purpose of comparing national PAT manpower needs with those of Illinois needs seems desireable and will encompass the second section of this chapter.

Campus Recruitment of Illinois Local Governments

In an effort to gage the intensity and scope of Illinois local government recruitment

173

at college and university campuses, 15 public and private schools that list a professional placement officer were mailed a questionnaire on local government recruitment.[1] Assessing the returns, it can be safely stated that with a few exceptions, Illinois local governments make little use of college campuses in their recruitment. Of the 15 schools, only eight reported that local governments recruited on a regular basis. It is also quite clear that local government recruiters take up only a very small portion of the placement bureaus' energies. The schools that report local government recruitment efforts are mainly those that are in an urban setting or can be easily reached from that setting. The schools reporting significant local government recruitment are: University of Illinois at Champaign, University of Illinois at Chicago Circle, Illinois Institute of Technology, Southern Illinois University at Edwardsville, and Northern Illinois University.

Conspicuously absent from the above listing are the University of Chicago and Northwestern University which are located in the Chicago metropolitan area. It seems that local governments in the immedicte area do not undertake to interview many graduating students on these campuses simply because the prospects for recruitment are quite dim. The graduating students at these two universities have a wide range of choice concerning their future employers, and for the most part, do not choose to be employed in local government service. In a letter to one of the researchers, an official of the Placement Bureau at the University of Chicago responded in this way to our questionnaire: "I guess the answer could be to most of these questions a simple 'No!' We are not approached by Illinois government for manpower, and they do not recruit on campus, and I am not really terribly optimistic about their chances of getting Masters of Business Administration students if they did. The federal government is beginning to make some impress on campuses such as this, but even there the volume is actually low." Also absent from the listing of schools at which local governments recruit is Roosevelt University. Considering its availability to a number of governments in the Chicago area, it is difficult to explain local governments not recruiting there, except to say that the University does not have many technical programs which local governments may find of interest. In the case of Eastern and Western Illinois Universities, the combination of predominately teacher-training programs and the relative inaccessability to local officials of large urban areas, may well account for the two reporting no local governmental recruitment on their campuses.

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[1] The universities and colleges surveyed are: Bradley University, DePaul University, Eastern Illinois University, Illinois Institute of Technology, Illinois State University, Illinois Wesleyan, Loyola University, Northern Illinois University, Northwestern University, Roosevelt University, Southern Illinois University at Carbondale, Southern Illinois University at Edwardsville, University of Chicago, University of Illinois at Chicago Circle, University of Illinois at Urbana, and Western Illinois University.

The only Illinois local governments reported consistently to have recruited on Illinois university campuses are the Metropolitan Sanitary District, the City of Chicago, and various departments of the Government of Cook County. Apart from these governments, the only other Illinois local governments reported, by the Edwardsville campus of Southern Illinois University, to have used the placement services of a state university, are the counties and several cities in the Madison and St. Clair county area. They repeatedly use the SIU-Edwardsville Placement Service.

Both campuses of Southern Illinois University report that a smattering of local governments outside of Illinois attempt to recruit personnel from their universities. These local governments are mainly in the metropolitan areas of surrounding states.

It is interesting to note that Bradley University in Peoria reported only one Illinois local government attempting to recruit their graduates, yet they were able to note four local governments from outside Illinois that had recruited and, in one case, succeeded in hiring one of their graduates. One downstate campus placement officer commented that he could not remember any Illinois local governments recruiting graduates from his campus, but noted that the City of Milwaukee kept his office regularly informed of all civil service openings. A good indication of the non-use of university placement services by Illinois local governments is an employment interview schedule of the placement service at the University of Illinois at Chicago Circle. The schedule for Winter and Spring quarters numbers 16 pages with approximately 225 employers listed. Of this number, only four are Illinois local governments plus one local government from outside of Illinois. The remainder of the prospective employers is composed of private industries and various agencies of the federal and state governments.

Local governments most often seek to recruit in the technical and natural sciences, such as engineering, mathematics, chemistry, biology, and related areas, so far as the campuses are concerned. A few universities report that persons are sought in other areas, such as personnel, accounting, human relations, and purchasing. Only two of the reporting placement bureaus indicated that local governments in Illinois sought employees on an across-the-board basis without a great deal of emphasis on a particular specialty.

In respect to the degree of success Illinois local governments have with using placement services of state universities and colleges, it seems that the local governments are successful when they make a good effort. Placement officials at the two campuses of the University of Illinois characterize efforts of local governments as "reasonably successful" and "ratio of hires-to-candidate-interviewed probably on a par with other employers." These comments suggest that local governments are reasonably successful when they make the effort. One downstate placement bureau official comments somewhat negatively concerning Illinois local government recruitment: "In most instances, local governments do a poor job in recruiting for college-trained persons." However, we understand that local governments often have informal contacts with universities through individual departments rather than the more formal placement bureaus, and thus do a more adequate job of recruitment than may be apparent to placement officers.

Analysis of ASPA Recruiter

In an effort to compare national PAT manpower needs to those in Illinois, we examined the Public Administration Recruiter, a publication sponsored by the American Society for Public Administration. The Recruiter is a personnel listing for the key positions in state and local governments in the United States. It is a general publication concerned with the listing of jobs and seems the most likely publication to have a cross-section of the positions local governments are trying to recruit. Since the Recruiter is a new effort, it is probable that there are some biases in the types of jobs listed. For instance, units such as special districts may not be fully aware of the possibility of advertising in the Recruiter. In addition, there are several functions for which the advertising of vacant positions is done in specialized trade journals making the need to advertise in the Recruiter less necessary. With such proper warnings, we can begin to present our findings from the May 19th, 1969, issue of the Recruiter

Although at times it proved difficult to fit job listings from the Recruiter into our categories, some fairly clear patterns do emerge. The occupation in greatest demand was that of the planner which was listed 26 times in the Recruiter. This occurrence coincides with the present study where the position of planner was found the most difficult to recruit. Half of the listings for planners require at least a Bachelor's degree, while the other half require at least a Master's degree. The position listed second most often is that of systems analyst. While very few of the job titles were actually listed as systems analyst, short job descriptions quite properly classified the position as such. In the job description, a word frequently used was "analyze" with the education requirements being extremely flexible, i.e. engineering, business, or advanced social science degrees were acceptable.

Somewhat in contrast to the findings in our survey is the high ranking of community organization and relations specialist in the Recruiter. Eight positions are listed as vacant in this area. The same number is listed for finance director. Four to six positions are listed as open for the following occupations: personnel administrator, public works administrator, civil engineer, housing specialist-building director, sanitary engineer, traffic manager or engineer, recreation specialist, and librarian. These positions with no exception require at least a Bachelor's degree and in many cases the persons occupying the positions are required to have a Master's degree.

Conspicuously absent from the Recruiter job listings are those positions that require two to four years post-high school training. Only two of the local governments gave any indication that persons with less than a Bachelor's degree would be considered for a particular position. Thus, it is not possible to speculate concerning the positions in the two to four years post-high school training category that are being most actively recruited by local governments across the country. This perhaps is due to the fact that positions requiring less training are easier to recruit, and easier to recruit in the immediate area of the employing unit.

BIBLIOGRAPHY

Included in the following bibliography are nearly all the references used in the preceding study and a few items that seemed promising but remained unobtainable throughout the study. The items are mainly reports of manpower research and federal and state governments publications concerned with Illinois local governments. Also included are references to local government research of political scientists, methodological statements for survey research, and other items that were helpful in solving particular problems encountered. A caveat to the user: many of the items below have been obtained directly from the offices of the publishing organization, and may only be available from those offices. Most of the publications, however, should be received and available (with a little hunting) from large university libraries as well as those libraries that have a special collection of items concerned with local government manpower.

Altes, Jane. Population Projections for the State of Illinois and Component Regions to 2010. Springfield: Department of Business and Economic Development, March, 1967.

Bachrack, Stanley D. and Scoble, Harry M. "Mail Questionnaire Efficiency: Controlled Reduction of Nonresponse," Public Opinion Quarterly, Vol. 31, No. 2 (Summer, 1967), pp. 265-271.

Backstrom, Charles H. and Hursh, Gerald D. Survey Research. Evanston: Northwestern University Press, 1963.

Battelle Memorial Institute. The Michigan Manpower Study. An Analysis of the Characteristics of Michigan's Labor Force in the Next 15 Years, by Manpower and Regional Economics Division, Socio-Economics Research Section . . . Columbus Laboratories. Columbus, Ohio: 1966.

Berg, Ivar. "Rich Man's Qualifications for Poor Man's Jobs," Trans-action, Vol. 6, No. 5 (March, 1969), pp. 45-50.

Blosten, Charles and Black, Allen. Survey of Higher Education for Public Administration in Colorado. Denver: Colorado Association for Education in Public Administration, July, 1968.

Boesel, Andrew W. "APT Personnel--Manpower Shortages and Recruitment Policies," The Municipal Year Book: 1968. Washington, D.C.: The International City Managers' Association, 1968, pp. 210-220.

180 | 181

Boesel, Andrew W. "Training Activities for ATP Personnel," The Municipal Year Book: 1967. Washington, D.C.: The International City Managers' Association, 1967, pp. 146-158.

Bogue, Donald J. The Population of the United States. Glencoe: The Free Press, 1959.

Brazer, Harvey. City Expenditures in the United States. New York: National Bureau of Economic Research, Inc., 1959.

Bureau of Statistics, Department of Public Health. Sources of Population Estimates for Illinois. Published Annually in "Vital Statistics Special Report Series," Springfield, Illinois.

Caldwell, Lynton K. "Determining Training Needs for Organizational Effectiveness." Personnel Administration, Vol. 26, No. 2 (March-April, 1963), pp. 11-19.

"Changes in Occupational Employment Over the Past Decade," Monthly Labor Review, August, 1967, pp. 27-30.

Committee for Economic Development, Improving Executive Management in the Federal Government. New York: 1964.

Committee on County Manpower Needs. 1968 Survey of County Manpower Needs. Sacramento: County Superviser Association of California, 1968.

Division of Local Governmental Affairs and Property Taxes. Illinois Property Tax Statistics: 1966. Springfield: Department of Revenue, 1968.

Dreiske, John. Your Government and Mine: Metropolitan Chicago. New York: Oceana Publications, Inc., 1959.

Dubin, Samuel S., Alderman, Everett, and Marlow, H. LeRoy. Educational Needs of Managers and Supervisers in Cities, Boroughs, and Townships in Pennsylvania. University Park: The Pennsylvania State University, 1968.

Exploring Michigan's Employment Expectations: A Summary Based on the Findings of the Michigan Manpower Study. Detroit: Michigan Employment Security Commission, April, 1968.

Fabricant, Solomon. The Trend of Government Activity in the United States since 1900. New York: National Bureau of Economic Research, Inc., 1952.

"Federal Government Work Force: A Need for New and More Complex Skills," Occupational Outlook Quarterly, Vol. II, No. 3 (September, 1967), pp. 24-27.

Ferris, Abbot L. "A Note on Stimulating Response to Questionnaires," American Sociological Review, Vol. 16, No. 2 (April, 1951), pp. 247-249.

Fischer, Glenn W., ed. Illinois State and Local Finance. Urbana: Institute of Government and Public Affairs, 1969.

Fischer, Glenn W., and Fairbanks, Robert P. Illinois Municipal Finance: A Political and Economic Analysis. Urbana: University of Illinois Press, 1968.

Gettman, Louis B. Problems of Maintenance in Manpower Planning. Athens, Georgia: Public Personnel Association Seminar: Manpower Management in the Public Service, February 13-16, 1968.

Gilpatrick, Eleanor G. Aspects of Manpower Supply in Illinois Regions: 1940, 1950, and 1960. Springfield: Department of Business and Economic Development, 1967.

Gingzberg, Eli. Manpower Strategy for the Metropolis. New York: Columbia University Press, 1968.

Gingzberg, Eli. "Manpower Trends--Their Implications for College Placement," Journal of College Placement, Vol. 27, No. 1 (October-November, 1966), pp. 22-23, 128, 130, 132.

Gingzberg, Eli and Anderson, James K. Manpower for Government, A Decade's Forecast. Chicago: Public Personnel Association, 1958.

Goldstein, Harold. "Projections of Manpower Requirements and Supply," Industrial Relations, Vol. 5, No. 3 (May, 1966), pp. 17-27.

Haase, Peter E. "Technological Change and Manpower Forecasts," Industrial Relations, Vol. 5, No. 3 (May, 1966), pp. 72-85.

Hansen, Lee and Striner, Herbert E. "The U. S. Manpower Future," in Proceedings of the Eighteenth Annual Winter Meeting of the Industrial Relations Research Association. Madison: The Association, 1966, pp. 10-31.

Hauser, Philip M. "More from the Census of 1960," Scientific American, October, 1962, pp. 30, 35-36.

Himmelbauer, William. "Occupational Manpower Requirements: Projections for the State of Illinois in 1975," July, 1968. (Mimeographed.)

Howards, Irving and Snider, Clyde F. County Government in Illinois. Carbondale: Southern Illinois University, 1960.

Illinois Board of Higher Education. Education in the Health Fields for State of Illinois. Two Volumes. Springfield: 1968.

Illinois Secretary of State, Paul Powell. Counties and Incorporated Municipalities of Illinois. March 1, 1968.

Institute of Public Administration, New York. Developing New York City's Human Resources: A Report of a Study Group . . . to Mayor John V. Lindsay. New York: 1966.

International City Managers' Association. In-Service Training for Municipal ATP Personnel, Report No. 279. Chicago: April, 1967.

In-Service Training of State and Local Officials and Employees. Washington, D.C.: Leo Kramer, Inc., 1967.

Janda, Kenneth. Data Processing: Applications to Political Research. Evanston: Northwestern University Press, 1965.

Karlen, Harvey M. The Governments of Chicago. Chicago: Courier Publishing Company, 1958.

Kessel, John. "Governmental Structures and Political Environment," American Political Science Review, Vol. 56 (September, 1962), pp. 615-621.

Key, V. O., Jr. A Primer of Statistics for Political Scientists. New York: Thomas Y. Crowell Company, 1954, 1966.

Klein, Harold M. Patterns of Public Employment in New Jersey. New Brunswick: Bureau of Governmental Research, Rutgers--The State University, 1968.

League of Women Voters of Illinois Program for 1967-1969. "The County," Study of Local Governmental Structure within Illinois, Chicago: March, 1968.

League of Women Voters of Illinois Program for 1967-1969. "Introduction," Study of Local Governmental Structure within Illinois, Chicago: May, 1968.

League of Women Voters of Illinois Program for 1967-1969. "The Township," *Study of Local Governmental Structure within Illinois*, Chicago: March, 1968.

Lief, Donald W. "The Coming Crisis in Municipal Personnel: Manpower Study Criticizes Independent Civil Service Commissions," *Nation's Cities*. Spring, 1963.

Levitan, Sar A. and Siegel, Irving H., eds. *Dimensions of Manpower Policy: Programs and Research*. Baltimore: The Johns Hopkins Press, 1966.

"Local Health Department--Services and Responsibilities," *The American Journal of Public Health*, Vol. 54, No. 1 (January, 1964), pp. 131-139.

Longworth, Donald S. "Use of a Mail Questionnaire," *American Sociological Review*, Vol. 18, No. 3 (June, 1953), pp. 310-313.

Luck, David J. *Service Industry Study of Illinois Statewide Economic Study*. Springfield: Department of Business and Economic Development, March, 1967.

Lyon, Leverett S., ed. *Governmental Problems in the Chicago Metropolitan Area*. Chicago: University of Chicago Press, 1957.

Mangum, Garth L. and Nemore, Arnold L. "The Nature and Functions of Manpower Projections," *Industrial Relations*, Vol. 5, No. 3 (May, 1966), pp. 1-16.

Manpower in the Next Decade. Personnel Letter No. 182, August, 1967. (Mimeographed.)

Manpower: Steps to Relieve an Acute Shortage. A report of a special committee to Governor Nelson A. Rockefeller. Albany: University of the State of New York, March, 1967.

Mayer, E. N. "Postage Stamps Do Affect Results of Your Mailing," *Printers Ink*, Vol. 217, No. 1 (October 4, 1946), p. 91.

Morton, J. E. *Analytical Potential of the Current Population Survey for Manpower and Employment Research*. Kalamazoo: The W. E. Upjohn Institute for Employment Research, 1965.

Morton, J. E. *On Manpower Forecasting*. Kalamazoo: The W. E. Upjohn Institute for Employment Research, 1968.

Mosher, Frederick C. and Poland, Orville F. The Costs of American Governments. New York: Dodd, Mead, and Company, 1964.

Municipal Finance in Illinois. Springfield: Michael J. Howlett, Auditor of Public Accounts, 1967.

Municipal Manpower Commission. Governmental Manpower for Tomorrow's Cities. New York: McGraw-Hill Book Company, Inc., 1962.

Muskie, Edmund S. "The State and Local Manpower Crisis," Personnel Administration, Vol. 29, No. 6 (November-December, 1966), pp. 6-12.

National Bureau of Economic Research. The Quality and Economic Significance of Anticipation Data. Princeton: Princeton University Press, 1960.

National Manpower Council. Government and Manpower: A Statement by the National Manpower Council with Background Chapters by the Council Staff. New York: Columbia University Press, 1964.

National Manpower Council. Manpower Policies for a Democratic Society. New York: Columbia University Press, 1965.

National Manpower Council. Public Policies and Manpower Resources. New York: Columbia University Press, 1964.

National Recreation and Park Association. Recreation and Park Manpower Supply/Demand Workbook. Washington, D.C.: 1968.

Northeastern Illinois Planning Commission. Population Employment and Land Use Forecasts for Counties and Townships in Northeastern Illinois: Planning Paper No. 10. Chicago: NIPC, 1968.

O'Brien, William E. "Annual Study of Salary and Fringe Benefits of Full-time Park and Recreation Personnel in Reporting Illinois Park Districts with Selected Valuations." Carbondale: 1968. (Mimeographed.)

O'Brien, William E. "1967-1968 Study of Selected Personnel Practices of Reporting Park and/or Recreation Departments in Illinois." Carbondale: 1968. (Mimeographed.)

O'Brien, William E. "Report of 1965-1966 Analysis of Recreation Leadership Personnel Practices in Selected Park and/or Recreation Departments in Illinois." Carbondale: 1968. (Mimeographed.)

Ohm, Betty and West, Mary. "What Price Professionalism?", *Illinois Libraries*, Vol. 49, No. 5 (May, 1967), pp. 384-397.

Pelekoudas, Lois M., ed. *Illinois Local Government*. Urbana: Institute of Government and Public Affairs, 1961.

Personnel Detail of the State Government of Illinois. Submitted to the General Assembly of Illinois by Governor Otto Kerner for the 75th Biennium, Ending June 30, 1969.

Pisciotte, Joseph, ed. *Manpower for Illinois Governments*. Urbana: Institute of Government and Public Affairs, 1968.

Poland, Orville F. *Public Employment in California*. Berkeley: Institute of Governmental Studies, 1964.

Post-Entry Training in the Local Public Service--With Special Reference to Administrative, Professional, and Technical Personnel in the United States. Chicago: International City Managers' Association, 1963.

Roeher, G. Allan. "Effective Techniques in Increasing Response to Mailed Questionnaires," *Public Opinion Quarterly*, Vol. 27, No. 1 (Spring, 1963), pp. 299-302.

Rogers, James F. *Staffing American Colleges and Universities: The Demand for Faculty and Other Professional Staff in Higher Education November 1963 through October 1969*. Washington, D.C.: U. S. Government Printing Office, 1967.

Rosenthal, Neal H. "The Health Manpower Gap: A High Hurdle," *Occupational Outlook Quarterly*, Vol. 11, No. 1 (February, 1967), pp. 1-5.

Rosenthal, Neal H. and Hedges, Janice Neipert. "Matching Sheepskins With Jobs," *Monthly Labor Review*, Vol. 91, No. 11 (November, 1968), pp. 9-15.

Ruttenberg, Stanley H. "Meeting Professional Manpower Needs," *Employment Service Review*, Vol. 3, No. 7 (July, 1966), pp. 1-5.

Salt, Allan F. "Estimated Need for Skilled Workers, 1965-1975," *Monthly Labor Review*, Vol. 89, No. 4 (April, 1966), pp. 365-371.

Schnore, Leo and Alford, Robert. "Forms of Government and Socioeconomic Characteristics of Suburbs," *Administrative Science Quarterly*, Vol. 8 (June, 1963), pp. 1-17.

Sheim, Lester, ed. Library Manpower Needs and Utilization. Proceedings of a Conference Sponsored by . . . American Library Association . . . March 9-11, 1967. Chicago: American Library Association, 1967.

Sherbenou, Edgar. "Class, Participation, and the Council-Manager Plan," Public Administration Review, Vol. 21, No. 1 (Winter, 1961), pp. 131-135.

Siegel, Irving H. Aggregation and Averaging. Kalamazoo: The W. E. Upjohn Institute for Employment Research, 1968.

Siegel, Irving H., ed. Prospects and Priorities. New York: A. M. Kelley, 1967.

Siegel, I. H. "Technological Change and Long-Run Forecasting," Journal of Business, July, 1956, pp. 141-156.

Sinnott, John D. and Bannon, Joseph J. Directory of Public Park and Recreation Personnel in Illinois. Urbana: Department of Recreation and Municipal Park Administration, University of Illinois, 1967.

Slorum, W. L., et al. "Increasing Response to Questionnaires and Structual Interviews," American Sociological Review, Vol. 21 (1956), pp. 221-225.

Snider, Clyde F. and Andersen, Roy. Local Taxing Units: The Illinois Experience. Urbana: University of Illinois, Institute of Government and Public Affairs, 1968.

Stambler, Howard V. "Manpower Needs by Industry to 1975," Monthly Labor Review, Vol. 88, No. 3 (March, 1965), pp. 279-284.

Stambler, Howard V. "State and Local Government Manpower in 1975," Monthly Labor Review, Vol. 90, No. 4 (April, 1967), pp. 13-17.

Stanley, David T., et al. Professional Personnel for the City of New York. Washington, D.C.: The Brookings Institution, 1963.

State Council of Economic Advisors. Manpower Issues in State Government: Major Impressions About Today and Tomorrow in Illinois Personnel. Chicago: Public Administration Counciling, 1962.

"Statistics," Illinois Libraries, Vol. 50, No. 8 (October, 1968), pp. 730-755.

Stewart, Ward and Honey, John C. University-Sponsored Executive Development Programs in the Public Service. Washington, D.C.: U. S. Government Printing Office, 1966.

Stone, Donald C. "Manning Tomorrow's Cities," Public Administration Review, Vol. 23, No. 2 (June, 1963), pp. 99-104.

Stout, Robert M., ed. Local Government In-Service Training: An Annotated Bibliography. Albany: V-B Printing Company, Inc., 1968.

Sweeney, Stephen B. and Charlesworth, James C. Achieving Excellence in Public Service. Philadelphia: American Academy of Political and Social Science, 1963.

Tjersland, Tore. Some Aspects of Employment Problems Facing the United States in the Period 1960 through 1970. Ann Arbor: University Microfilms, Inc., 1962.

U. S. Bureau of the Census. Census of Population, 1960, General Social and Economic Characteristics. Washington, D.C.: U. S. Government Printing Office, 1962.

U. S. Bureau of the Census. County and City Data Book 1967. Washington, D.C.: U. S. Government Printing Office, 1967.

U. S. Bureau of the Census. Directory of Federal Statistics for Local Areas. Washington, D.C.: U. S. Government Printing Office, 1966.

U. S. Bureau of the Census. Government in Illinois. Census of Governments: 1962. Vol. 7, No. 13. Washington, D.C.: U. S. Government Printing Office, 1964.

U. S. Bureau of the Census. Governmental Organization. Census of Governments: 1967. Vol. 1. Washington, D.C.: U. S. Government Printing Office, 1968.

U. S. Bureau of the Census. Historical Statistics on Governmental Finances and Employment. Census of Governments: 1962. Vol. VI (Topical Studies), No. 4. Washington, D.C.: U. S. Government Printing Office, 1964.

U. S. Bureau of the Census. Public Employment in 1968. Washington, D.C.: U. S. Government Printing Office, April, 1969.

U. S. Bureau of the Census. State Distribution of Public Employment in 1964. Washington, D.C.: U. S. Government Printing Office, March, 1965.

U. S. Bureau of Labor Statistics. American Industrial and Occupational Manpower Requirements, 1967-1975. Washington, D.C.: U. S. Government Printing Office, 1967.

U. S. Bureau of Labor Statistics. A Directory of Area Wage Surveys July 1965-June 1967. Washington, D.C.: U. S. Government Printing Office, 1968.

U. S. Bureau of Labor Statistics. Employment of Scientific, Professional, and Technical Personnel in State Governments. Washington, D.C.: U. S. Government Printing Office, January, 1964.

U. S. Bureau of Labor Statistics. "Labor Force Projections by State, 1970 and 1980." A Monthly Labor Review Reprint, October, 1966.

U. S. Bureau of Labor Statistics. Manpower in State and Local Governments 1965 and 1975. Washington, D.C.: U. S. Government Printing Office, 1966.

U. S. Bureau of Labor Statistics. Occupational Employment Statistics Sources and Data. Washington, D.C.: U. S. Government Printing Office, 1966.

U. S. Bureau of Labor Statistics. Occupational Outlook Handbook: Employment Information on Major Occupations for Use in Guidance, 1966-67. Washington, D.C.: U. S. Government Printing Office, 1965.

U. S. Bureau of Labor Statistics. Projections 1970: Interindustry Relationships, Potential Demand Employment. Washington, D.C.: U. S. Government Printing Office, 1966.

U. S. Bureau of Labor Statistics. Technician Manpower: Requirements, Resources, and Training Needs. Washington, D.C.: U. S. Government Printing Office, June, 1966.

U. S. Civil Service Commission. Assessing and Reporting Training Needs and Progress. Washington, D.C.: U. S. Government Printing Office, 1961.

U. S. Civil Service Commission. "Bibliography of Selected Sources for Manpower Projections." April, 1968. (Mimeographed.)

U. S. Civil Service Commission. Progress in Executive Manpower Management: A Report to the President on the Executive Assignment System. November 11, 1967.

U. S. Department of Housing and Urban Development. Community Development Training and Urban Information and Technical Assistance: 100 Outstanding Programs. Washington, D.C.: Office of Intergovernmental Relations and Planning Assistance, June, 1968.

U. S. Department of Housing and Urban Development. Recent Research in Planning: A Reference--1968. Washington, D.C.: Office of Intergovernmental Relations and Planning Assistance. March, 1968.

U. S. Department of Housing and Urban Development. Solving Urban Problems Through Community Development Training: A Program Guide for Federal-State Training. Part I, Title VIII, Housing Act of 1964. Washington, D.C.: HUD, January, 1968.

U. S. Department of Labor. Health Manpower, 1966-75: A Study of Requirements and Supply. Washington, D.C.: U. S. Department of Labor, June, 1967.

U. S. Department of Labor. A Report on Manpower Requirements, Resources, Utilization, and Training. Washington, D.C.: U. S. Department of Labor, March, 1964.

U. S. Employment Service for Washington, D.C. An Area Skill Survey with Employment Projections to June 1971. Washington, D.C.: U. S. Department of Labor, 1968.

U. S. National Advisory Commission on Health Manpower. Report . . . Vol. I. Washington, D.C.: U. S. Government Printing Office, 1967.

U. S. Office of Manpower, Automation and Training. Selected Manpower Indicators for States. Washington, D.C.: 1963.

U. S. Office of Manpower Policy, Evaluation, and Research. Manpower Projections: An Appraisal and a Plan of Action. A Report of the Working Group on Manpower Projections to the President's Committee on Manpower. Washington, D.C.: U. S. Government Printing Office, 1967.

U. S. Office of Manpower Policy, Evaluation, and Research. Technology and Manpower in the Health Service Industry, 1965-75. Washington, D.C.: U. S. Government Printing Office, 1967.

U. S. President. Manpower Report of the President: A Report on Manpower Requirements, Resources, Utilization, and Training. Washington, D.C.: U. S. Government Printing Office, 1967.

U. S. Senate Subcommittee on Intergovernmental Relations. "Hearings on S699 and S1485, 90th Congress, 1st Session." Washington, D.C.: U. S. Government Printing Office, April 26-28, 1967.

Vetter, Eric W. *Manpower Planning for High Talent Personnel*. Ann Arbor: The University of Michigan Press, 1967.

Walker, David B. and Stover, Carl F. "Governments as Partners in Strengthening Personnel." Chicago: *Public Personnel Association*, 1967.

Walsh, F. J. "Governmental Manpower Policies and Problems at the State Level." Presented at Public Personnel Association Seminar, Athens, Georgia: February 15, 1968.

Williams, Oliver P. and Adrian, Charles R. "Community Types and Policy Differences." in *City Politics and Public Policy*. Edited by James Q. Wilson. New York: John Wiley and Sons, Inc., 1968.

Wolfert, Richard J. and Malden, Joyce. *The Government of the City of Chicago*. Chicago: Municipal Reference Library, 1966.

Wood, Robert. *1400 Governments*. Cambridge: Harvard University Press, 1961.

Yabroff, Bernard. "Trends and Outlook for Employment in Government," *Monthly Labor Review*, Vol. 88, No. 3 (March, 1965), pp. 285-291.

ADDENDUM

Banovetz, James M., and Fugiel, Peter J. "The Urban Service Involvement of Illinois Institutions of Higher Education." Paper prepared for consideration by a conference of Illinois educators, De Kalb, Illinois, February 26, 1969.

Beckman, Norman. "Planning for Maximum Feasible Understanding." Paper presented at the 30th meeting of the American Society for Public Administration, Miami Beach, Florida, May 21, 1969.

Ferguson, Eleanor A. "Public Libraries: Development in 1967," The Municipal Yearbook: 1968. Washington, D.C.: The International City Managers' Association, 1968, pp. 403-406.

Illinois Municipal League, Illinois Municipal Directory. Springfield: Illinois Municipal League, 1967.

U. S. Bureau of the Census, Employment of Major Local Governments: 1967. Vol. III, Washington, D.C.: U.S. Government Printing Office, 1969.

U. S. Bureau of the Census, Historical Statistics of the United States: Colonial Times to 1957. Washington, D.C.: U. S. Government Printing Office, 1960.

U. S. Bureau of the Census, Statistical Abstract of the United States: 1965. (86th edition.) Washington, D.C.: 1965.

U. S. Bureau of the Census, Statistical Abstract of the United States: 1968. (89th edition.) Washington, D.C.: 1968.

U. S. Commission on Law Enforcement and Administration of Justice, The Challenge of Crime in a Free Society. Washington, D.C.: U. S. Government Printing Office, February, 1967.

U. S. Commission on Law Enforcement and Administration of Justice, Task Force Report: Corrections. Washington, D.C.: U. S. Government Printing Office, 1967.

Appendix A

LOCAL GOVERNMENT MANPOWER SUPPLY AND NEEDS STUDY

Public Affairs Research Bureau
Southern Illinois University
Carbondale, Illinois 62901

Gentlemen:

The Public Affairs Research Bureau of Southern Illinois University is conducting a study for the Illinois State Board of Higher Education to determine the future professional, administrative, and technical (PAT) manpower needs of Illinois local governments (excluding school districts). The study will concentrate on the needs of local governments in 1970 and 1975.

We recognize that the questionnaire is an imposition upon busy officials, but we feel that it is an extremely worthwhile imposition for two reasons. First, the final report of the study will inform Illinois higher educational institutions of the programs of study that must be implemented to produce competent PAT manpower for Illinois local governments. Second, our questionnaire should stimulate individual localities to assess their future professional, administrative, and technical manpower needs. A copy of the summary results will be available if you wish it. Your cooperation is appreciated.

We would greatly appreciate your careful attention to the following:

1. It is important that we receive your returned questionnaire even if your government does not employ, or will not employ in 1975, professional, administrative, and technical manpower.
2. Some smaller governments may have two, one, or even no professional, administrative, and technical personnel so that the questionnaire is far less complicated than it may first appear.
3. If possible, use mid-October, 1968, payroll data in completing the questionnaire.
4. If possible, please complete questionnaire in cooperation with planner, manager, and/or budget supervisor of your locality.
5. In making your projections for 1970 and 1975, assume that there is not to be a depression or other major catastrophe, and that there will be little reorganization of Illinois local governments.
6. Where precise information is not available, please make estimates and so indicate with an asterisk.
7. Feel free to criticize any aspects of the questionnaire or project that are not clear.
8. Please mail the questionnaire in the enclosed envelope which requires no postage.

We shall be extremely grateful for your earliest convenient response - within the next few days - if possible.

Sincerely yours,

Thomas Vocino

Thomas Vocino
Research Associate

Enclosures

Definitions*

1. REPORTING UNIT. The unit of government to which the questionnaire has been mailed. Include all agencies and personnel under its direct control.

2. PROFESSIONAL, ADMINISTRATIVE, AND TECHNICAL (PAT) MANPOWER. All full-time and part-time positions that require at least two years of post-high school training or its equivalent before an individual can be considered for the position.

3. FINANCIAL ADMINISTRATION. Treasurer's office, auditor or comptroller's office, tax assessing, tax billing and collection, budgeting, purchasing, central accounting offices, and similar financial administration.

4. GENERAL CONTROL AND ADMINISTRATION. Central administrative officers and agencies, such as the manager, clerk, recorder, legal staff, and central personnel or planning agency. Exclude financial activities reported at item 1. (Of questionnaire)

5. STREETS AND HIGHWAYS. Maintenance, repair, construction, and administration of streets, alleys, sidewalks, roads, highways, and bridges. Street cleaning and sewer employees should be reported at item 7. (Of questionnaire)

6. PUBLIC WELFARE. Maintenance of homes and other institutions for the needy, administration of public assistance; social workers; etc. Hospital and sanatorium employees should be reported at item 9. (Of questionnaire)

7. POLICE PROTECTION. Police department, sheriff's and constable's office, coroner, jails, reformatories, detention homes, and probation activities.

8. FIRE PROTECTION. Fire department, etc. Report any forest fire protection activities at item 8. (Of questionnaire)

9. STREET CLEANING, REFUSE COLLECTION, AND SEWAGE DISPOSAL. Street cleaning garbage and refuse collection, operation of sanitary and storm sewer systems and sewage disposal plants.

10. PARKS, RECREATION, AND NATURAL RESOURCES. Parks, playgrounds, swimming pools, auditoriums, museums, marinas, zoo, agriculture, forestry, forest fire protection, irrigation, drainage, flood control, etc.

11. HEALTH AND HOSPITALS. Public health services, out-patient clinic, visiting nurses, food and sanitary inspections, institutions for in-patient medical care.

12. PUBLIC UTILITIES. Public water supply system, electric power supply system, gas supply system, rapid transit system, and airports owned and operated by your government.

13. LIBRARIES. Public libraries operated by your government.

14. URBAN RENEWAL AND COMMUNITY DEVELOPMENT. Slum clearance and redevelopment housing projects, community organization work, etc., of your government.

15. ALL OTHER. All employees of your government and its agencies not reported above, except for any school system employees.

* The functional divisions used herein mainly follow the categories devised by the United States Bureau of the Census.

ILLINOIS MUNICIPAL LEAGUE

ILLINOIS MUNICIPAL LEAGUE
Member: National League of Cities

A. L. SARGENT
Executive Director Emeritus

1220 SOUTH SEVENTH STREET
SPRINGFIELD, ILLINOIS 62703
TELEPHONE AREA CODE 217—525-1220

4th November 1968

To the
Municipal Official Addressed:

It is my hope as executive director of the Illinois Municipal League that your municipal government could cooperate in this important study. The major purpose of the study is to provide information from which curricula can be developed at state institutions of higher learning.

Yet, there are additional side benefits for municipal governments in general and your municipality in particular. First, the State Board of Higher Education will have the necessary information so that fields of study relevant to municipal government can be implemented. Second, your municipality will have an opportunity to assess its future professional, administrative, and technical manpower needs.

Your cooperation in this study will be appreciated by all concerned.

Cordially yours,

ILLINOIS MUNICIPAL LEAGUE

Steven Sargent

Steven Sargent
Executive Director

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Instru[illegible] in [illegible] Lett[illegible] Defi[illegible] Shee

Function	Level of Education Required			Budgeted Full-Time Positions		Average Budgeted Monthly Salary for Oct., 1968	Number Required In		Present Difficulty of Filling Position			Recruitment Area			Could Adequate Personnel be Obtained Through In-Service Training?
	2–4 Yrs. Post H.S. Training	*Bachelor's Degree*	*Graduate Degree*	*Filled*	*Unfilled*		*1970*	*1975*	*Not Very Difficult*	*Difficult*	*Very Difficult*	*Can Recruit From Illinois*	*Can Recruit From Illinois But Difficult*	*Can Not Recruit From Illinois*	
1. FINANCIAL ADMINISTRATION— *See Definition 3.* Occupation:															
a. Finance Director															
b. Accountant															
c. Budget Analyst															
d. Auditor															
e. Tax Assessor															
f. Purchaser															
Other PAT Personnel:															
g.															
h.															
2. GENERAL CONTROL AND ADMINISTRATION *See Definition 4.* Occupation:															
a. City Manager															
b. Asst. City Manager															
c. Central Administrative Personnel															
d. Statistician															
e. Architectural Draftsman															
f. Planner															
g. Planning Aide															
h. Systems Analyst															
i. Personnel Administrator															
j. Labor-Relations Employee															
k. Job-Description Writer															
l. Data Processing Specialist															
m. Computer Programmer															
n. Public Relations Employee															
o. Attorney															
p. Clerk or Recorder															
Other PAT Personnel:															
q.															
r.															
3. STREETS AND HIGHWAYS— *See Definition 5.* Occupation:															
a. Public Works Administrator															
b. Civil Engineer															
c. Engineering Technicians and Draftsmen															

Function	Level of Education Required			Budgeted Full-Time Positions		Average Budgeted Monthly Salary for Oct., 1968	Number Required		Present Difficulty of Filling Position			Recruitment Area			Could Adequate Personnel be Obtained Through In-Service Training?
	2–4 Yrs. Post H.S. Training	*Bachelor's Degree*	*Graduate Degree*	*Filled*	*Unfilled*		*In 1970*	*1975*	*Not Very Difficult*	*Difficult*	*Very Difficult*	*Can Recruit From Illinois*	*Can Recruit From Illinois But Difficult*	*Can Not Recruit From Illinois*	
4. PUBLIC WELFARE *See Definition 6.*															
a. Social welfare administrator															
b. Social worker, B.S.															
c. Social worker, M.S.															
d. Home economist															
e. Psychologist															
Other PAT personnel:															
f.															
g.															
5. POLICE PROTECTION *See Definition 7.*															
a. Public safety director															
b. Policeman															
c. Laboratory technician															
d. Criminologist															
e. Coroner															
Other PAT personnel:															
f.															
g.															
6. FIRE PROTECTION *See Definition 8.*															
a. Fire Chief															
Other PAT personnel:															
b.															
c.															
7. STREET CLEANING, REFUSE COLLECTION, AND SEWAGE DISPOSAL *See Definition 9.*															
a. Sanitary executive															
b. Sanitary engineer															
c. Sewage-disposal engineer															
Other PAT personnel:															
d.															
e.															
8. PARKS, RECREATION, AND NATURAL RESOURCES *See Definition 10.*															
a. Recreation specialist															
b. Park administrator															
c. Forester															
d. Fishery specialist															
e. Agricultural economist															

Function	Level of Education Required			Budgeted Full-Time Positions		Average Budgeted Monthly Salary for Oct., 1968	Number Required In		Present Difficulty of Filling Position			Recruitment Area			Could Adequate Personnel be Obtained Through In-Service Training?
	2–4 Yrs. Post H.S. Training	*Bachelor's Degree*	*Graduate Degree*	*Filled*	*Unfilled*		*1970*	*1975*	*Not Very Difficult*	*Difficult*	*Very Difficult*	*Can Recruit From Illinois*	*Can Recruit From Illinois But Difficult*	*Can Not Recruit From Illinois*	
f. Arborculturist															
g. Botanist															
h. Geologist															
i. Ranger															
Other PAT personnel:															
j.															
k.															
9. HEALTH AND HOSPITALS *See Definition 11.*															
a. Public health physician															
b. Other physician															
c. Dietician															
d. Bacteriologist															
e. Physiologist															
f. Hearing clinician															
g. Public health educator															
h. Laboratory technician															
i. X-ray technician															
j. Registered nurse (R.N.)															
k. Veterinarian															
l. Sanitarian															
m. Speech pathologist															
n. Speech audiologist															
o. Chemist															
p. Psychologist															
q. Hospital administrator															
r. Psychiatrist															
s. Dentist															
Other PAT personnel:															
t.															
u.															
10. PUBLIC UTILITIES *See Definition 12.*															
a. Utilities administrator															
b. Hydraulic engineer															
c. Purification specialist															
d. Electrical engineer															
e. Power specialist															
f. Transit specialist															
g. Meterologist															
h. Controller															

Function	Level of Education Required			Budgeted Full-Time Positions		Average Budgeted Monthly Salary for Oct., 1968	Number Required		Present Difficulty of Filling Position			Recruitment Area			Could Adequate Personnel be Obtained Throug In-Service Training?
	2–4 Yrs. Post H.S. Training	*Bachelor's Degree*	*Graduate Degree*	*Filled*	*Unfilled*		*In* 1970	*In* 1975	*Not Very Difficult*	*Difficult*	*Very Difficult*	*Can Recruit From Illinois*	*Can Recruit From Illinois But Difficult*	*Can Not Recruit From Illinois*	
i. Airport administrator															
Other PAT personnel:															
j.															
k.															
11. LIBRARIES *See Definition 13.*															
a. Librarian															
Other PAT personnel:															
b.															
c.															
12. URBAN RENEWAL AND COMMUNITY DEVELOPMENT *See Definition 14.*															
a. Community organization specialist															
b. Community relations adviser															
c. Geographer															
d. Housing specialist															
Other PAT personnel:															
e.															
f.															
13. ALL OTHER *See Definition 15.*															
a. Building Inspector															
b.															
c.															
d.															
e.															
f.															
g.															
h.															
i.															

SUMMARY INFORMATION

	Total for Your Govt.	*1. Finance*	*2. General Control*	*3. Streets and Highway*	*4. Public Welfare*	*5. Police Protection*	*6. Fire Protection*	*7. Street Cleaning, etc.*	*8. Parks, Recreation, etc.*	*9. Health and Hospitals*	*10. Public Utilities*	*11. Libraries*	*12. Urban Renewal, etc.*	*13. All Other, Except Education*
1968 Expenditures														
All Types of Employees for 1968														

Estimated 1968 population served by your government __________.

We would appreciate any comments you may have concerning professional, administrative, and technical manpower needs of Illinois local governments.

If additional space is needed, please use the back of this questionnaire.

REPORTING UNIT ____________________ Check if you desire a copy of summary results __________

SIGNED ____________________ TITLE ____________________

Please give postal zip code of your locality __________.

Please return the completed questionnaire in the enclosed envelope.

Southern Illinois
University

CARBONDALE, ILLINOIS 62901

Public Affairs Research Bureau

(UNIVERSITY PLACEMENT BUREAU LETTER AND QUESTIONNAIRE)

February 12, 1969

Mrs. Edith Sarelas, Director of Placement
University of Illinois, Circle Campus
Room 822
University Hall
601 South Morgan Street
Chicago, Illinois 60607

Dear Mrs. Sarelas:

The Public Affairs Research Bureau of Southern Illinois University is conducting a study for the Illinois State Board of Higher Education to determine the future professional, administrative, and technical (PAT) manpower needs of Illinois local governments (excluding school districts). This study will concentrate on the needs of local governments in 1970 and 1975 and will inform Illinois higher educational institutions of the programs of study that must be implemented to produce competent PAT manpower for Illinois local governments.

We are contacting your office as well as all other university placement services in the state of Illinois in order to determine if local governmental units actively engage in recruiting PAT manpower (professional, administrative, and technical positions are those that require at least two years of post-high school training or its equivalent before an individual can be considered for the position).

If you will supply us with responses to the brief questions enclosed, it would be extremely helpful to the study. Your assistance is genuinely appreciated.

Sincerely yours,

Allan H. Lammers
Research Assistant

AHL:jg

Enc.

Any additional information beyond the scope of the following questions would, of course, be helpful.

A. Do local Illinois governments (cities, townships, counties and/or special districts excluding school districts) make use of your university placement services? (If answer to A is "No" skip to F).

B. Please list the names and/or estimated number of local governmental units that have actively recruited on your campus over a given period of time. If the information is available, also note how often the recruiters have returned to use the placement service.

C. What types of training are most often sought, i.e., administrative, technological, etc.?

D. Please list the job title (s) for which the employer was specifically recruiting. Also note the salary for each position if your records contain such information.

E. Would you estimate to what degree you think that employers achieve success in filling their PAT job openings as a result of their visits to your campus?

F. Do local governments outside Illinois make use of your placement services? (If the answer to F is "Yes", answer questions B through E for out of state employers).

Appendix B

Regression Explanation and Data

As was suggested in Chapter Three, a major factor relating to the level of public employment growth is population. Orville Poland noted that almost all the variance in employment in California is accounted for by population for a period of 22 years from 1940-1962 except for the wartime years of 1942-1946 and 1951-1953.[1]

In the study at hand, we have overall functional employment data for the years 1957, 1962, and 1967, as well as population totals for these years (Table B-1). In addition, we were able to interpolate a population projection for the year 1975 from current estimates and 1980 county projection totals.[2]

We ran each of thirteen sets of employment data against population in a simple regression. As can be seen in Table B-2, employment levels in most of the functions and total local government employment have a high correlation with population. However, with just three observations, only in a few instances is the F-ratio significant at the .05 level of confidence. For those persons interested in the data used in this manipulation and/or the output, the accompanying tables are provided.

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[1] Orville F. Poland, Public Employment in California (Berkely: Institute of Government, University of California, 1964), p. 48.

[2] We are not allowed to give the source of these data because they have not been officially released. However, we have confidence in their validity.

Table B-1

Employment in Illinois Local Governments: 1957-1967*

	Function	1957 Employment	% of 1957 Total	1962 Employment	% of 1962 Total	1967 Employment	% of 1967 Total
1.	Public Welfare	4037	2.1	5587	2.3	7938	2.7
2.	Libraries	2077	1.1	2329	1.0	3090	1.0
3.	Housing & Urban Renewal	1291	0.7	2335	1.0	2797	0.9
4.	Parks & Recreation	7365	3.8	7419	3.1	7238	2.4
5.	Sewage & Sanitation	8022	4.1	6440	2.7	8143	2.7
6.	Other Utilities	14646	7.5	13547	5.6	13215	4.5
7.	Water Supply	4982	2.6	5346	2.2	5659	1.9
8.	General Control & Financial Administration	10573	5.4	13950	5.8	15038	5.1
9.	Fire Protection	7084	3.6	8026	3.3	8712	2.9
10.	Police Protection & Corrections	17195	8.8	21226	8.8	24311	8.2
11.	Health & Hospitals	12382	6.4	15176	6.3	17318	5.8
12.	Highways	9232	4.7	14091	5.8	12957	4.4
13.	Education	89206	45.8	120446	49.7	158366	53.4
14.	Miscellaneous and Unassignable	6843	3.5	6524	2.7	11520	3.8
15.	FTEE (Total Full-time Employment)	194935	100.1	242442	100.3	296302	99.7

* The population totals for the State of Illinois for the years considered are 1957: 9,611,400; 1962: 10,330,000; 1967: 10,850,000; and 1975: 11,798,859. The former three are estimates made by the Bureau of Statistics of the Illinois Department of Public Health. The latter is an interpolated projection explained in the text.

Source: Worksheets of the 1967 Census of Governments and publications of the 1957 and 1962 Census of Governments of the U. S. Census Bureau.

Table B-2

REGRESSION OUTPUT FOR ILLINOIS POPULATION AND LOCAL GOVERNMENT EMPLOYMENT DATA

	Function	Regression Equation	Std. Error	R^2	F-ratio (df=1)	t-ratio (df=1)
1.	Public Welfare	Em.[a] = -25845 + .0031 (Pop., 1975)[b]	.000659	.9564	21.9453	4.6846
2.	Libraries	Em. = -5600 + .0008 (Pop., 1975)	.000310	.8661	6.4669	2.5430
3.	Housing & Urban Renewal	Em. = -10488 + .0012 (Pop., 1975)	.000157	.9839	61.1249	7.8182
4.	Parks & Recreation	Em. = 8280 + .00009 (Pop., 1975)	.000118	.3759	0.6024	-0.7761
5.	Sewage & Sanitation	Em. = +7983 + (+.0004) (Pop., 1975)	.000153	.0008	0.0008	-0.0286
6.	Water Supply	Em. = -255 + .0005 (Pop., 1975)	.000026	.9976	419.4908	20.4814
7.	General Control & Financial Administration	Em. = -23958 + .0036 (Pop., 1975)	.000197	.9970	330.5614	18.1813
8.	Fire Protection	Em. = -5547 + .0013 (Pop., 1975)	.000003	1.0000	231010.5781	480.0917
9.	Police Protection & Corrections	Em. = -44794 + .0063 (Pop., 1975)	.000953	.9779	44.1551	6.6449
10.	Health & Hospitals	Em. = -17609 + .0031 (Pop., 1975)	.001498	.8128	4.3409	2.0835
11.	Highways	Em. = -21143 + .0032 (Pop., 1975)	.002494	.6277	1.6863	1.2986
12.	Education	Em. = -443471 + .0552 (Pop., 1975)	.006779	.9851	66.3248	8.1440
13.	Total Local Government Employment	Em. = -548924 + .0771 (Pop., 1975)	.007811	.9899	97.5358	9.8760

[a] Projected employment in 1975.

[b] Population in 1975 is projected to be 11,798,859.

Source: Worksheets of the 1967 Census of Governments and publications of the 1957 and 1962 Census of Governments of the U.S. Census Bureau. These data are on file on IBM cards at the Public Affairs Research Bureau of Southern Illinois University at Carbondale.

INDEX

A
Accountant, 75, 76-79
Administrative Personnel, 92-95
Airports, 141
Alderman, E., 85
American Society for Public Administration, 173, 177
Architectural Draftsman, 98-99
Area-of-Recruitment Scale, defined, 72-73
Assistant City Manager, 86-87
Attorney, 96-98
Auditor, 75, 80

B
Bacteriologist, 157-158
Bannon, Joseph J., 118
Banovetz, James M., 7
Beckman, Norman, 1-2
Biologist, 135
Boesel, Andrew W., 86
Boone, County of, 52
Bradley University, 174, 176
Budget Analyst, 75, 79-80
Building Appraisor, 75
Building Inspector, 120-121
Business Manager, 75

C
Campus Recruitment, 173-175
Casework Supervisors, 151
Central Administrative Personnel, 87-88
Champaign, County of, 27, 51
Chemist, 135
Chicago, City of, 2, 21, 24, 25, 29, 64, 76, 175
Chicago Civil Service Commission, 25
Chicago Housing Authority, 122
Chicago Library System, 165, 167
Chicago Metropolitan Sanitary District, 29, 132-138, 174-175
Chicago Park District, 116, 118
Chicago Port District, 22
Chicago Transit Authority, 29, 48, 143-144
Chicago, University of, 174-175
Chief Executive - Sanitary Function, 132-133
City Manager, 32, 85
Civil Engineer, 125-127, 179
Clay, County of, 52
Community Development and Housing, 119-123
Community Organization Specialist, 119, 178
Community Relations Specialist, 119, 178
Comptroller, 75
Computer Programmer, 94-95
Cook County Board of Commissioners, 25
Cook, County of, 6, 24-25, 27, 29, 51, 58, 61-62, 87, 93-96, 98-99, 175
Cook County Department of Public Aid, 67, 147, 149, 152
Cook County Highway Department, 126
Cook County Hospital, 155
Coroner, 104

D
Data Processing Specialist, 94-96
DeKalb, County of, 38
Dentist, 160
Department of Housing and Urban Development, 1, 7, 9, 14-15
DePaul University, 174
Dietician, 157
Difficulty-of-Recruitment Scale, defined, 69
Dubin, S.S., 85
DuPage, County of, 25, 27, 51-53, 61

E
Eastern Illinois University, 174-175
Education, 47, 49, 170-172
Elected Positions, 66
Electrical Engineer, 141
Engineering Technician and Draftsman, 128-129

F
Fabricant, Solomon, 41
Fairbanks, Robert P., 109, 132, 166
Ferguson, Eleanor A., 166-167
Finance Director, 75-76, 178
Financial Administration, 47, 49, 75-84
Financial Supervisor, 75
Fire Protection, 47, 49, 64, 109-111

INDEX (Cont.)

Fisher, Glenn W., 109, 132, 166
Ford Foundation, 173
Fulton, County of, 52
Fugiel, Peter J., 7

G
General Control, 47, 49, 85-101

H
Health and Hospitals, 47, 49, 154-163
Hearing Clinician, 160
Home Economist, 149-150
Hospital Administrator, 160
Housing and Urban Renewal, 121-123
Housing Law, 1964, 1
Housing Specialist, 120, 179

I
Idaho, State of, 20
Illinois Department of Revenue, 22
Illinois Institute of Technology, 174
Illinois Municipal League, 33
Illinois State Board of Higher Education, 1, 7, 9, 15, 26, 38, 155, 160, 163
Illinois State University, 174
Illinois Wesleyan, 174
International City Managers Association, 86

J
Jackson, County of, 21, 33, 52

K
Kane, County of, 25, 27, 38, 51, 61
Kendall, County of, 52
Kerner Commission, 113

L
Laboratory Technician, 158
Lake, County of, 25, 27, 51, 61
Land Appraisor, 75
Landscape Engineer, 116
Legislative Internship Program, 6
Librarian, 166, 167, 179
Libraries, 47, 49, 165-169
Loyola University, 174

M
Macon, County of, 27
Madison, County of, 27, 50, 51, 122, 175
Mangum, Garth L., 14
Marlow, H. L., 85
Meteorologist, 141
Michigan, State of, 18
Microbiologist, 135
Milwaukee, City of, 176

N
National Recreation and Park Association, 12
Naturalist, 116-117
Nemore, Arnold L., 14
Northern Illinois University, 38, 174
Northwestern University, 174

O
Ogilvie, Richard B., 25
Ohm, Betty, 165
Omnibus Crime Control and Safe Streets Act - 1968, 103
Other Utilities, 47, 49, 143-145

P
Parks and Recreation, 47, 49, 65, 113-118
Park and Recreation Administrator, 115
PAT, definition of, 1
Pennsylvania, State of, 20
Pennsylvania Study, 85
Peoria, City of, 176
Peoria, County of, 27
Personnel Administrator, 92-94, 179
Personnel Specialist, 92-94
Planner, 88-92, 178
Planning Aide, 92
Poland, Orville F., 43, 45
Policeman, 63, 104-105
Police Protection and Corrections, 47, 49, 103-109
Pounian, Charles A., 25
Powell, Paul, Secretary of State, 29, 165
Power Specialist, 141
President's Commission on Law Enforcement and Administration of Justice, 103, 106
Pretest, 23
Probation Officer, 105-106
Property Appraiser, 75

INDEX (Cont.)

Property Inspector, 75
Psychiatrist, 160
Public Administration Recruiter, 173, 177-179
Public Affairs Research Bureau of Southern Illinois University, 1
Public Aid Representative, 150
Public Health Educator, 160
Public Health Physician, 155-157
Public Health Specialist, 159-160
Public Relations Employees, 98
Public Safety Director, 105
Public Utilities, 138-145
Public Welfare, 47, 49, 148-153
Public Welfare Administrator, 148
Public Works Administrator, 125-126, 148, 179
Pulaski, County of, 52-53
Purchaser, 75, 80-81
Purification Specialist, 139
Purposes of Research, 2

R
Real Estate Appraisor, 75, 81-82
Recreation Specialist, 116-179
Registered Nurse, 158-159
Rock Island, County of, 27, 110
Roosevelt University, 174-175
Rosenthal, Neal H., 154

S
St. Clair, County of, 27, 50, 51, 111, 122, 175
St. Louis Metropolitan area, 50
Sampling, 20-23
Sangamon, County of, 27
Sangamon State University, 38
Sanitarian, 159
Sanitary Engineer, 133-135, 179
Sewage and Sanitation, 47, 49, 132-138
Sinnott, John D., 118
Social Case Work Instructor, 150-151
Social Worker (B.S.), 148
Social Worker (M.S.), 148-149
Southern Illinois University, Carbondale, 116, 174, 176
Southern Illinois University, Edwardsville, 174-176
Speech Audiologist, 160
Stanley, David T., 17
Statistician, 98
Streets and Highways, 125-131
Suburban Cook County Tuberculosis Sanitarium District, 154
Systems Analyst, 96, 178

T
Tax Assessor, 81-82
Tazewell, County of, 27
Technicians, 135-136
Traffic Manager or Engineer, 179
Treasurer, 75
Treatment Plant Operator, 136-137

U
Union, County of, 21, 33
University of Illinois, Champaign, 6, 116, 174, 177
University of Illinois, Chicago Circle, 64, 174, 176-177
Utility Administrator, 138-139

V
Vermilion, County of, 51-52
Veterinarian, 160

W
Warren, County of, 52
Washington, County of, 52
Water Supply, 47, 49, 141-143
Welfare Rehabilitation Worker, 151-152
Western Illinois University, 174-175
West, Mary, 165
Will, County of, 25, 27, 38, 51-53, 61
Williamson, County of, 21, 33, 52
Winnebago, County of, 27, 50-51

X
X-ray Technician, 158